SEPTEMBER '60

MODERN TEXTILES

MAGAZINE

Specializing in Man-Made Fibers and Blends since 1925

FIBERS

FABRICS

FINISHES

Croft Carpet Mills' NOLAN HELMS- rising young man in a growing young industry— story page 21

THIS MONTH

DESKBOOK OF MANMADE FIBER FACTS

Pullout Tables of Deniers & Filaments

What you'll see at Greenville

Program of Dyers' Convention

PLUS 12 MORE EXCLUSIVE REPORTS AND USEFUL ARTICLES

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"We are operating at higher speeds."
"There is less yarn breakage."
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● More Uniform Lubrication Without Oil Waste.
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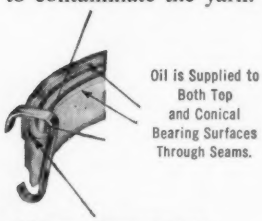

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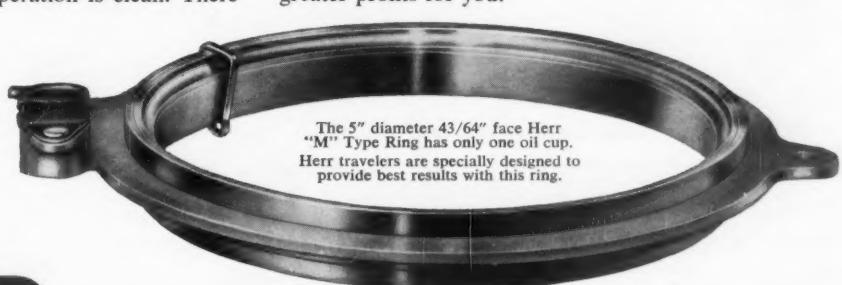

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MODERN
TEXTILES MAGAZINE*

September, 1960 Vol. 41, No. 9

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Established 1925

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ROBERTS

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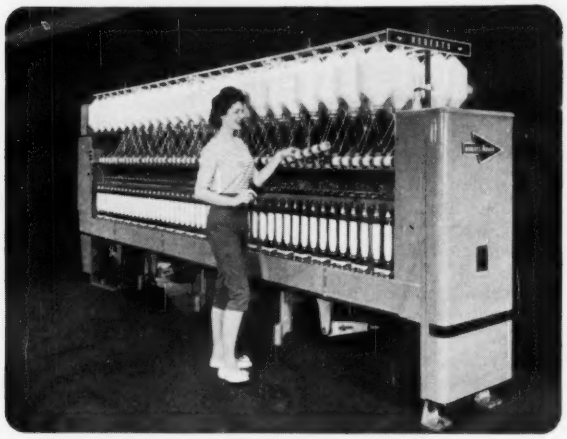
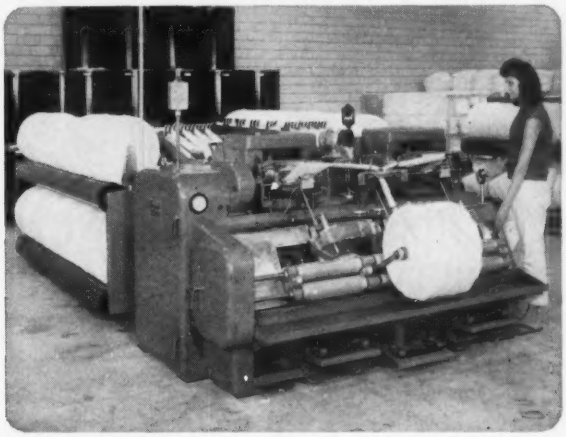
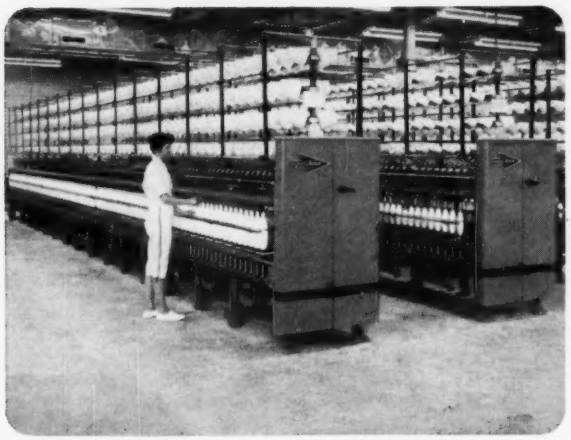
for Cotton, Worsted, or Long Fiber Systems



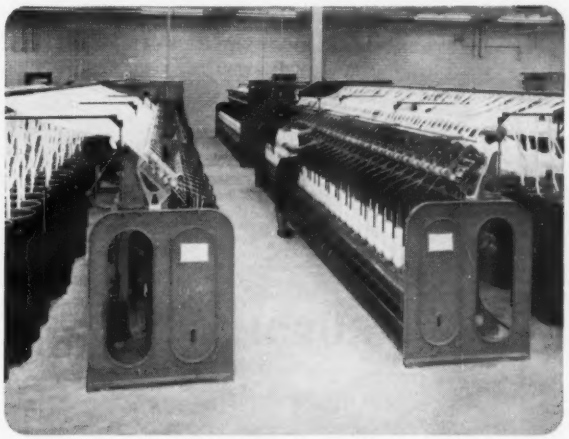
ROBERTS ARROW SPINNING for both cotton system and long fiber system yarn spinning for natural and synthetic fibers and blends. High speed, all ball bearing, big package Arrow Spinning Frames in 25-inch or 36-inch width. Exceptional flexibility and simplicity of operation in the manufacture of improved quality yarns at reduced costs and modest initial investment.



ROBERTS-TEMATEX worsted system preparatory machines, including ParaBlenders, ParaDrafters and AutoEveners, are rugged, high performance machines for pinning, parallelizing, drafting and blending worsted and synthetic fibers prior to roving and spinning, and in top making plants. AutoEvener automatically and instantaneously corrects delivered sliver weight to within plus or minus 1%.



ROBERTS TWISTERS for plying yarns are completely ball bearing equipped and designed for high speed ring twisting operations. 25- or 36-inch frames. Up to 3½-inch rings and 12-inch bobbins. Package weights 1¼ pounds on cotton, ¾ to 1 pound on worsted.



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AATT to Meet Sept. 7

To open its fall and winter series of monthly meetings, the New York Chapter of the American Association for Textile Technology, Inc., on the evening of Sept. 7, will hear a paper devoted to Arnel 60, Celanese's new form of its triacetate fiber. The speaker will be Dr. R. D. Williams, manager of product development, Celanese Fibers Co. He will summarize the properties of Arnel 60, its processing characteristics and will display samples of typical fabrics and applications.

The meeting will be held in the Vanderbilt Hotel, starting at 6:30, and will be preceded by a cocktail hour and dinner. All persons interested in textiles are invited to attend. Tickets for members are $5 each; for non-members $6. Reservations can be made by getting in touch with Miss Bernice Bronner, Secretary of AATT, at PLaza 7-4233, 100 West 55 Street, New York City.

Textile Imports Rising

Sharp increases in U. S. imports of cotton textiles have occurred since reductions in U. S. textile import duties were made in 1955 during negotiations under the General Agreement on Tariffs and Trade. According to the American Cotton Manufacturers Institute, Inc., these imports reached new highs in 1959. The Institute cited these figures:

U. S. cotton yarn imports totaled 835,000 pounds in 1958; increased 65% to 1.4 million pounds in 1959, with latest statistics for the first four months of 1960 indicating a 5.5-million-pound import level or an annual rate for this year of about 1.5 million pounds.

U. S. cotton cloth imports in 1958 totaled 141 million square yards, and rose 70% to 241 million square yards in 1959; on the basis of 1960 first quarter imports, U. S. mills stand to lose almost one-half billion yards or production of unfinished cotton cloth this year.

The Institute said that the U. S. has changed from a net exporter to a net importer of textile manufactures since 1958. The excess of imports over exports steadily increased from 6% in 1958 to an estimated 43% in 1960 (annual rate based on 1960 first quarter imports).

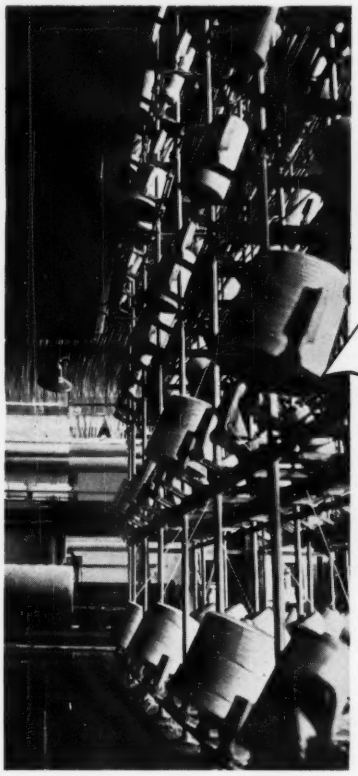
James A. Chapman, president of the Institute, called the U. S. Tariff Commission's recent denial of relief on cotton textile imports "incredible," and "another clear indication of the complete ineffectiveness of the procedures laid down by the Congress to safeguard from low-wage imports the jobs and investments of loyal Americans." Chapman said that the commission's action "is another positive indication that all groups adversely affected by our national foreign trade policy must go directly to the Congress for action."

Dismiss Bigelow FTC Suit

The U. S. District Court in Washington, on June 29 dismissed the suit by Bigelow-Sanford Carpet Co. contesting the Federal Trade Commission's requirement that it classify its Zantrel polynosic fiber as rayon. The Court suggested its ruling might properly be considered by the U. S. Court of Appeals along with the company's request for a preliminary injunction against FTC.

U. S. Attorney John F. Doyle defended the FTC's decision not to provide a separate generic name for the polynosic fiber, holding that, as a regenerated cellulosic fiber, it could properly be classified under the rayon generic name.

Mathias Correa, Bigelow-Sanford's attorney, told the court that, when FTC promulgated its rule, matter relevant to his company's polynosic fiber was not presented, and that FTC took no evidence and held no hearing on its application for a separate generic classification. Correa said Zantrel was closer to natural cellulose than rayon and had different characteristics.



GOODYEAR

Vitel

*means "Freedom"**

Outstanding mill processability is another advantage of using fiber spun from VITEL— newest of the polyester resins. One reason: High fiber-to-fiber cohesion as exhibited by VYCRON (America's most advanced self-care fiber by Beaunit Mills, Inc., Fibers Division). This results in unusual yarn strength and excellent resistance to lap splitting—both of which are important to good mill efficiency. Further details? Write Goodyear, Chemical Division, Dept. U-9476, Akron 16, Ohio.

Other advantages of fibers spun from VITEL:
*Superior resistance to abrasion and pilling
*Outstanding dyeability and colorfastness
*High tensile strength—for stronger, fine-count fabrics
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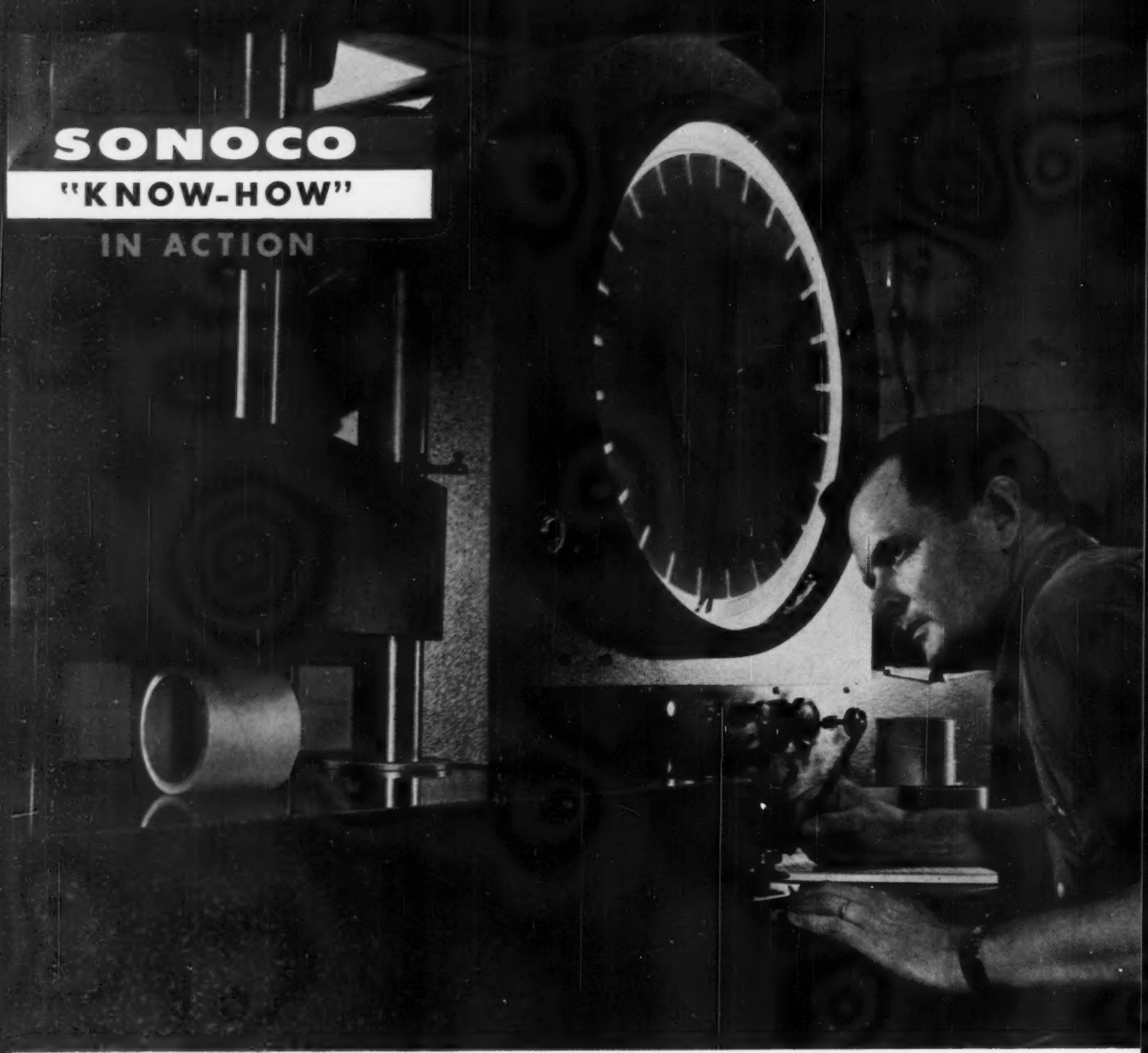

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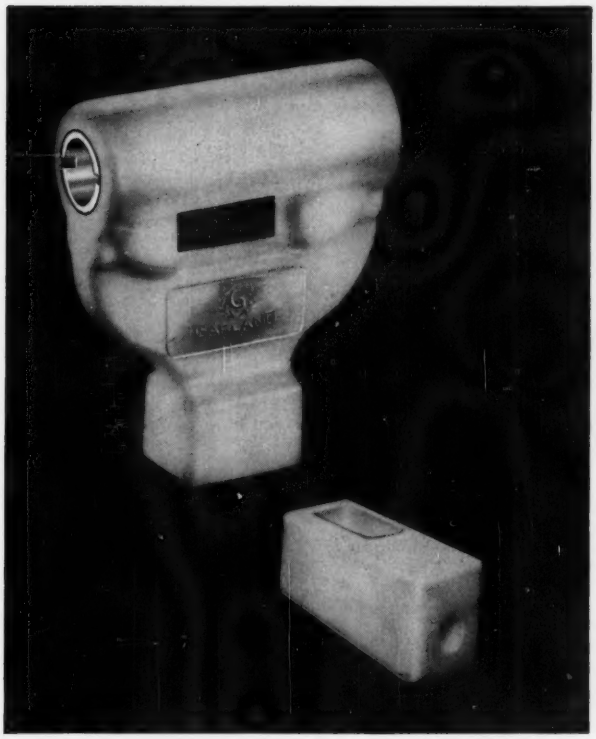

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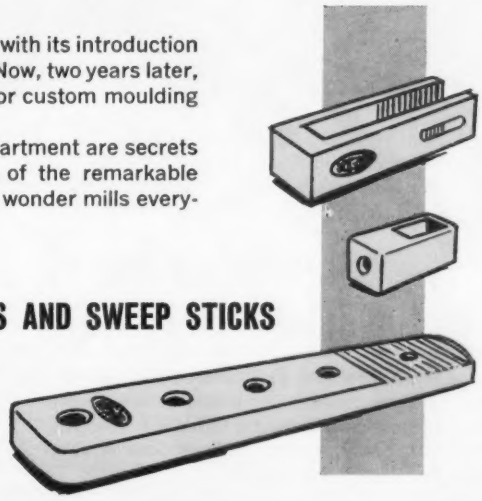
Two years ago, Garland startled the textile industry with its introduction of the 1st plastic picker by an American manufacturer. Now, two years later, Garland is still startlingly way ahead with its facilities for custom moulding this miraculous plastic material.

Hidden in Garland's Research and Development Department are secrets that produce undreamed-of lastability and efficiency of the remarkable use-proved plastic loom picker and other products. No wonder mills everywhere have depended on Garland for over 94 years.



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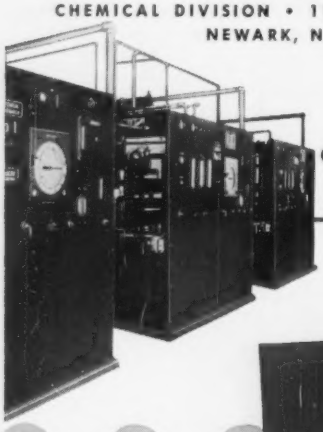

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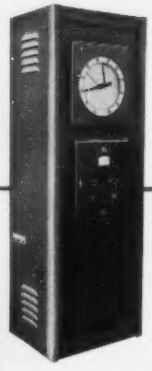

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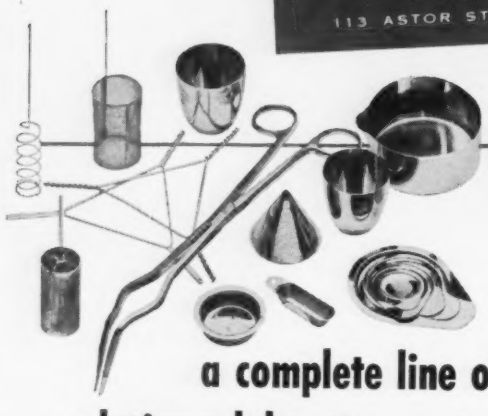

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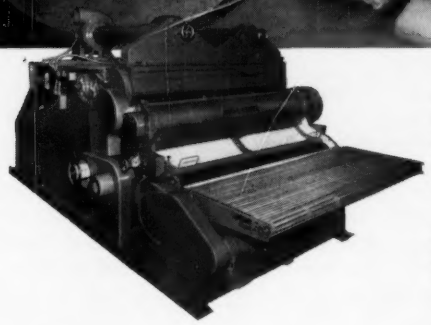
mean BIGGER PROFITS for YOU



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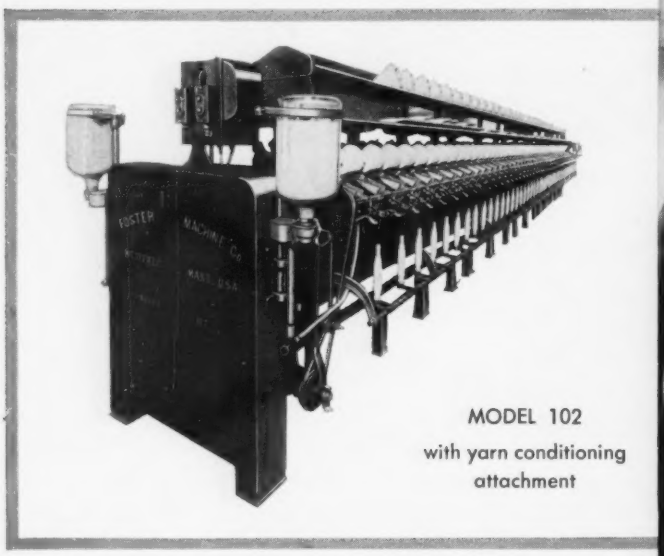
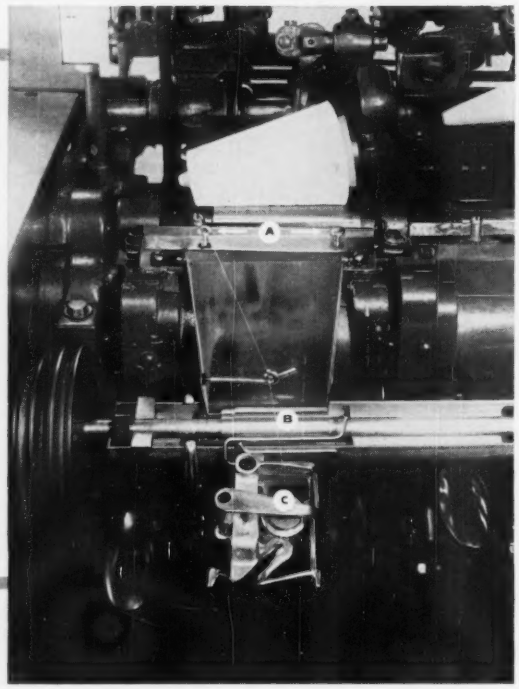
FOSTER MODEL 102

. . . For Backwinding Bulk, Stretch and Texturized Yarns



MODEL 102
with yarn conditioning attachment

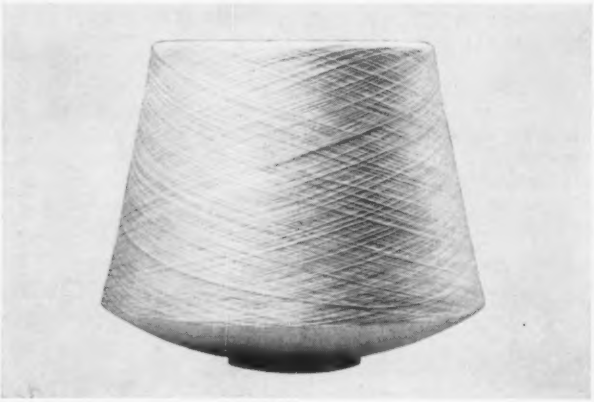


Mushroom buttons (A), moistening attachment (B) and tension attachment (C) on Model 102.

An Outstanding Example of This Machine's

FLEXIBILITY

For many years the Foster Model 102 has been widely accepted for the winding of all types and counts of spun yarns, because of its flexibility, or adaptability, including adjustable angle of wind and adjustable taper. Once again this reputation is confirmed by the machine's recent economical adaptation to the winding of bulk, stretch and texturized yarns.



142-9 Cone of Textralized® yarn wound on Model 102.

In addition to flexibility the Model 102 offers the following: —

QUALITY CONES. The increased taper reduces yarn drag and equalizes tension at all cone diameters. The convex base prevents "nipitis". Highly efficient slub catchers automatically inspect yarn. Ribbon breaker prevents ribbon wind. Idler shell on winding drum prevents chafing of yarn.

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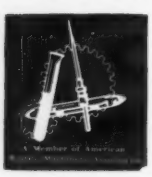

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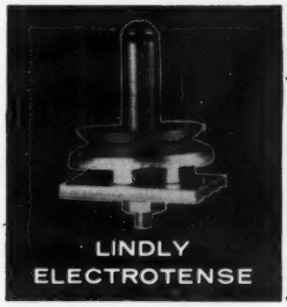

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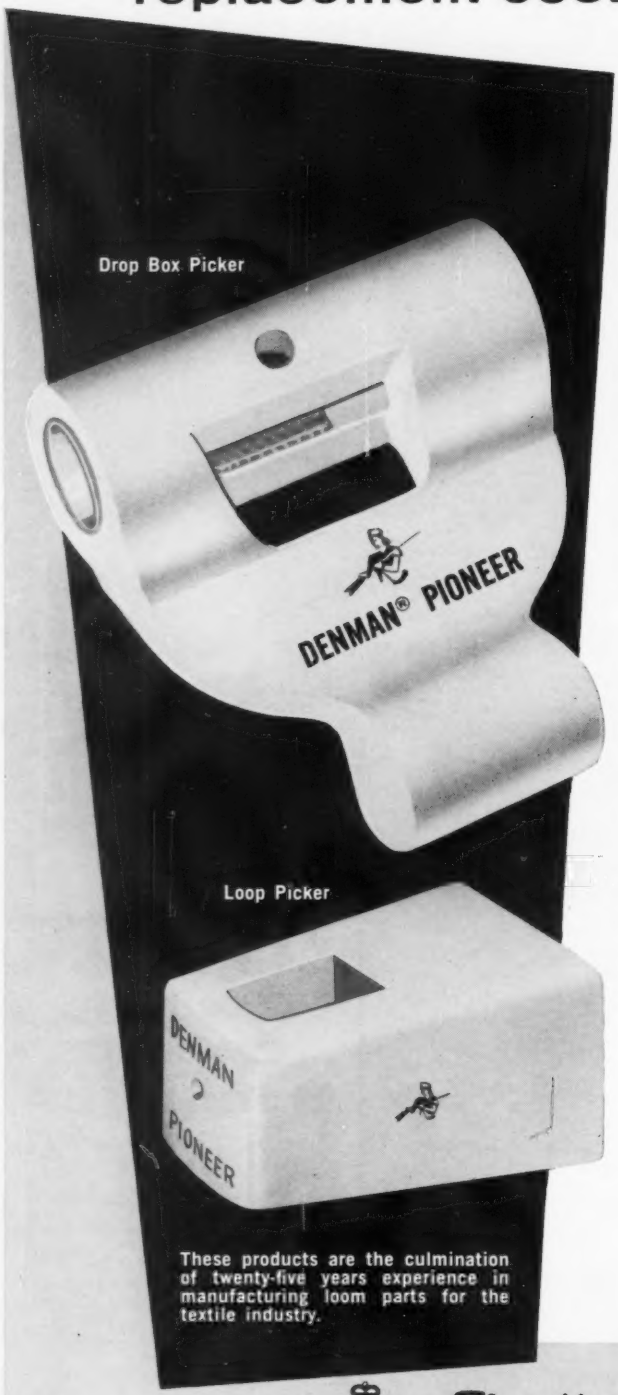
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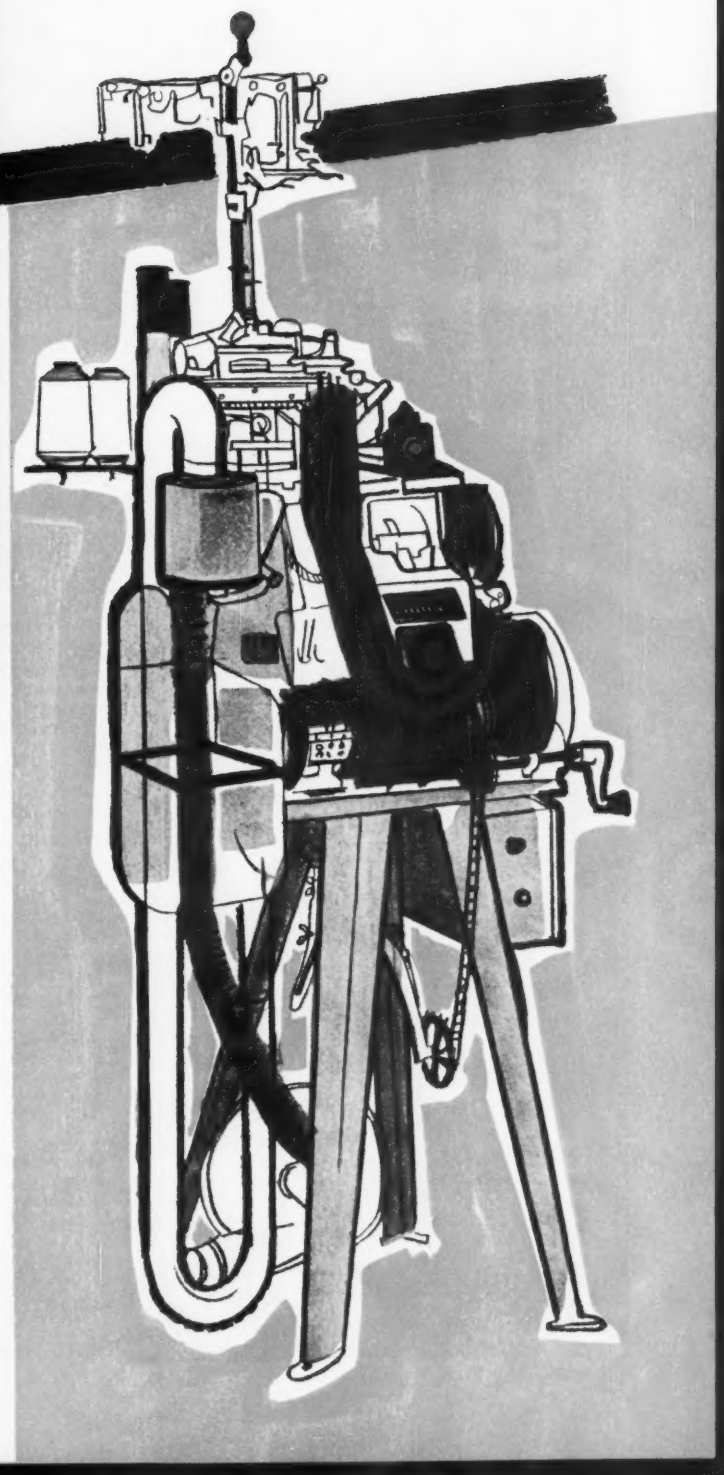

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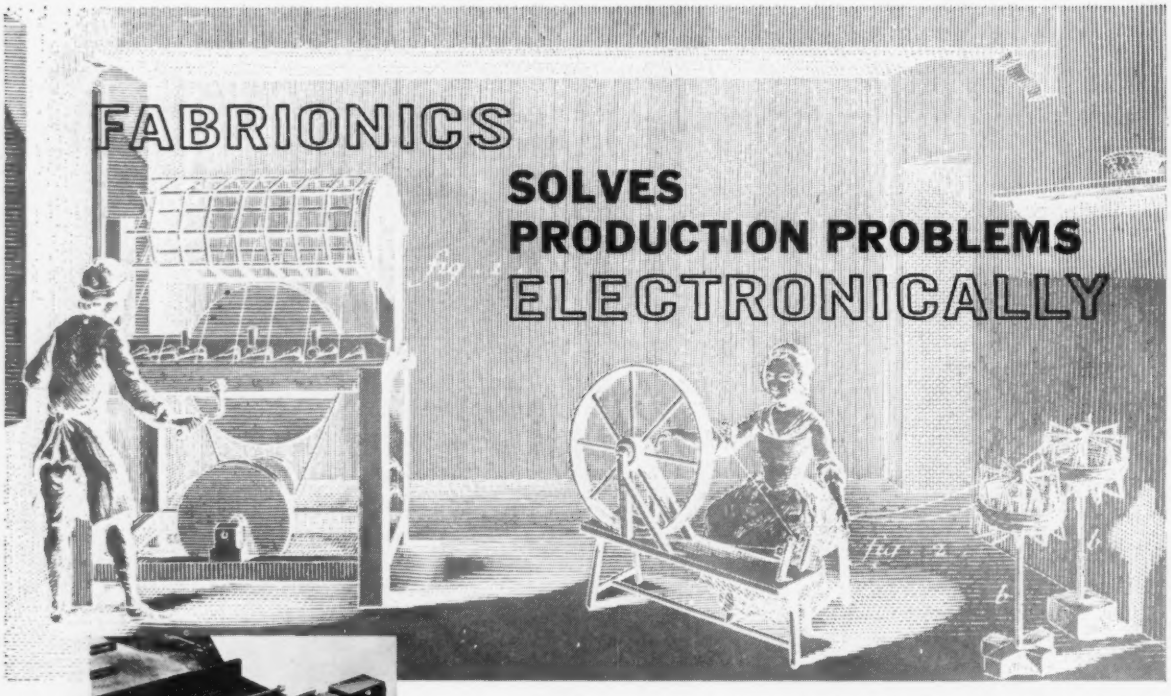

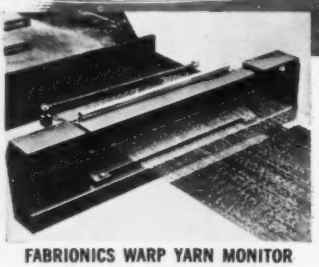

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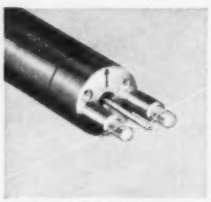

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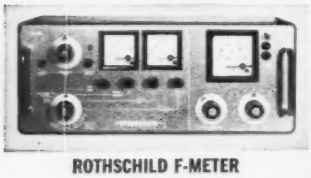

ROTHSCHILD F-METER

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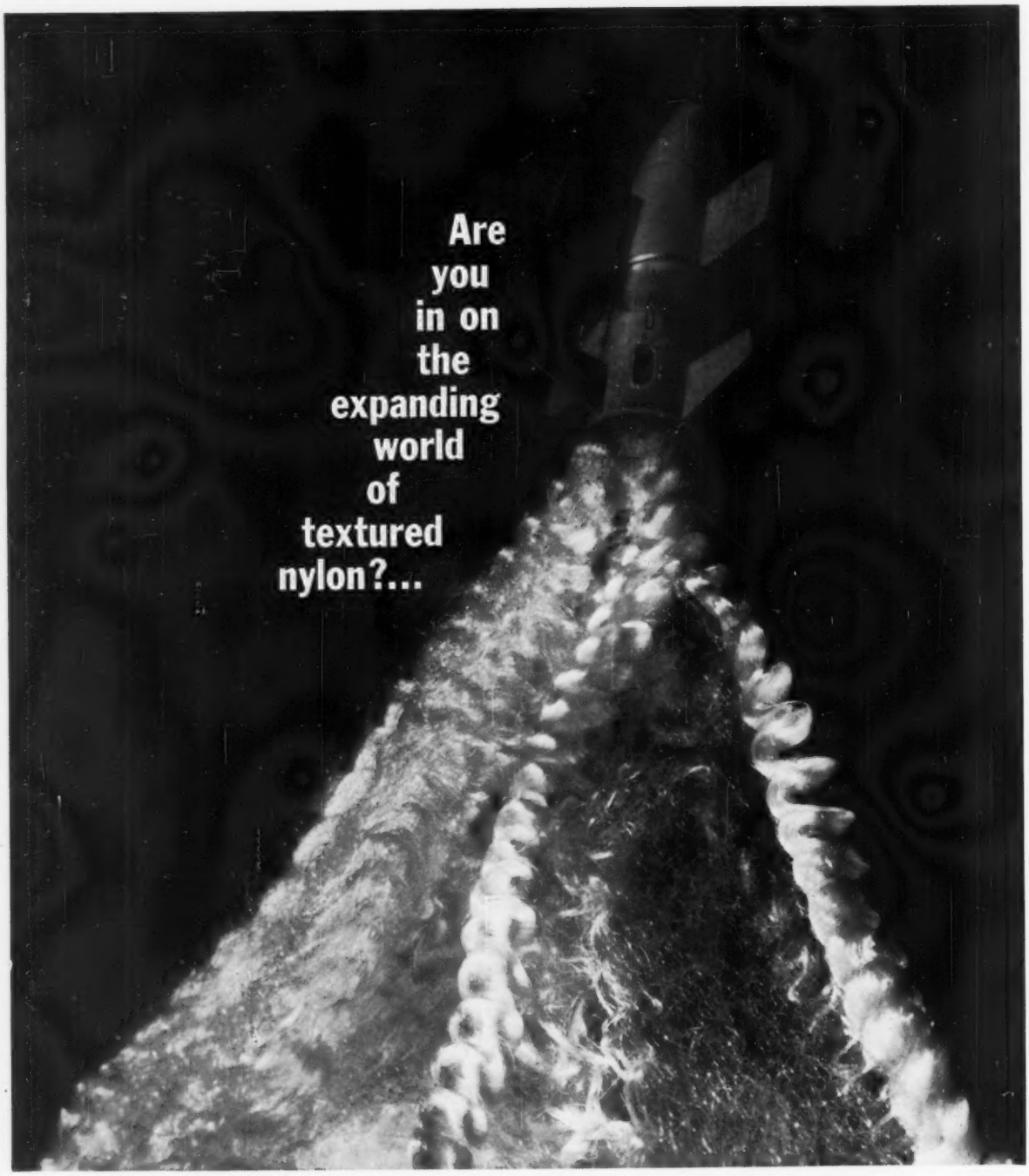

Inter-textures . . . Multi-textures . . . Space Treatments . . . Mirror-effects . . . are just a few of the new words finding more frequent use in forward-thinking textile mills. They describe new achievements made possible because of millmen, designers and stylists with vision who have seen the potential in one specific yarn—Textured Caprolan® nylon—and made the most of it. How this tough continuous filament nylon can help you enjoy new opportunities is a story we'd be happy to review with you at the Southern Textile Exposition at Greenville, South Carolina.

And wait until you see the examples of the amazing versatility of this extraordinary new fiber. Why, Caprolan is causing a revolution in carpeting, upholstery fabrics, and seat-belt webbings—all of which will be on display in our booth. You'll also be interested in seeing an exciting array of products made with our high-tenacity, heat-stabilized Golden Caprolan yarns. More proof that the most versatile nylon yarn is

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September '60

MODERN TEXTILES
Magazine

Publisher's Viewpoint

Peril Point for the Textile Industry

If an overwhelming weight of logical argument, strongly reinforced with a wealth of irrefutable facts and figures can persuade the U.S. Tariff Commission and the Committee for Reciprocity Information, then textile leaders may feel satisfied that last month they struck stout blows in defense of their industry, with all that it means to the livelihood of many thousands of American citizens.

In Washington last month, textile leader followed textile leader in stating well-thought-out reasons why the Government should not consent, in the meeting next year in Geneva under the General Agreement on Tariffs and Trade, to the lowering of tariffs on textile products listed for negotiation. These distinguished spokesmen for our textile industry also urged that textile items on the GATT negotiation list should be withdrawn.

Among the many statements made by industry leaders, perhaps the one that most succinctly and sharply presents the industry's point of view was that of Seabury Stanton, speaking in behalf of the Northern Textile Association. Stanton, a veteran textile manufacturer who is president of Berkshire Hathaway, Inc., called upon the Federal Government to remove all textile items from the GATT negotiation list. Of equal importance, he urged that U.S. representatives should enter into negotiations with foreign countries for a detailed country-by-country and fabric-by-fabric quota system for textile imports into the United States.

Stanton moved directly to the heart of the import problem when he pointed out that the great variance in wages and cost of production between European and Asian producers meant that no single duty could protect American manufacturers against unfair competition based on low wage production abroad. He pointed out that a duty high enough to equalize costs between Asian producers and American producers would serve to exclude European goods. But duties geared to European costs, he said, would not protect the American textile industry from goods originating in Hong Kong, Japan and other Asian countries. The tremendous increases of yardage in textile products, he said, imported from such low cost countries as India, Thailand, Pakistan, Formosa and Hong Kong as well as the continuation of low cost imports from Japan, are flooding our markets at prices which are impossible for the U.S. textile industry to match.

Danger also for Manmade Fibers

Of special importance to the manmade fiber producing industry were the cogent arguments presented by the Rayon Staple Fiber Producers Association and the Man-Made Fibers Association in favor of tariff relief. In asking for withdrawal of previous tariff concessions on rayon staple fiber and an increase in the present 15% tariff to 25%, spokesmen for the rayon fiber industry pointed out that imports in 1959 had reached 25% of domestic demand while operation of U.S. productive equipment has fallen below 55% of capacity. It was pointed out that Japan has sufficient excess capacity to supply more than the entire U.S. annual consumption; that domestic prices for rayon staple have dropped about 15% in six months and are now about 28 cents a pound, the lowest price since 1947.

On behalf of the manmade fiber industry as a whole, its spokesmen strongly opposed reductions in the duties for manmade fiber imports. It was shown that the present rapidly increasing trend of imports of manmade fibers, along with the sharply increasing productive capacity of foreign nations, made it imperative, for the future survival of the industry, that the Tariff Commission should declare the manmade fiber industry at a peril point, and that the Committee on Reciprocity Information should make a decision that there shall be no reductions in duties on manmade fibers offered or conceded in the forthcoming GATT negotiations.

A. H. McCullough

TEXTILE NEWS

World Wide

RUSSIA'S TEXTILE INDUSTRY continues to stride forward. M. A. Lesechko, deputy chairman of the Soviet State Planning Commission, said his country's per capita textile output by the end of 1960 will be 30 square meters—about the same as France. First six months' output totaled 3.3 billion square meters, he said.

BRITAIN SUPPLIES MORE late model textile equipment to the Soviets. Platt Brothers, with a long history as machinery supplier to Russia, has landed another order—this one for $1,966,090 worth of draw-twisting machinery used for stretching high tenacity synthetic yarns. Deliveries are to start early in 1961. The equipment has only been developed in the past two years.

FRENCH ACRYLIC FIBER OUTPUT to start in March, 1961. Britain's giant Courtauld's Ltd. has teamed up with the French Prouvost woolen interests to produce Courtelle for the French market. The U. K. fiber is used in sweaters, blankets, cardigans, dresses and hand-knitting yarns. A plant is being built at Calais.

MORE JAPANESE TEXTILE EXPORTS ought to be directed to West Europe, marketing official urges. Ken Furuhata, of Japan's Export Trade Promotion Association (JETRO), told a group of textile men in Osaka that last year's exports to Europe rose only 12%, against a 50% increase to the U. S. Europe's living standards present a greater export opportunity, he said.

JAPANESE FIRM MAPS new acrylic fiber plant. Toho Rayon Co. announced it would construct a 22,000-pound per day plant to produce Beslon acrylic fiber in Yoshiwara, some 200 miles west of Tokyo. An ultimate production goal of 66,000 pounds daily is planned.

GERMAN TEXTILE EXECUTIVE predicts world output of synthetic textiles in 1960 will account for over 20% of the total manmade (cellulosic plus synthetic) fiber production. This would compare with 16% in 1958. Dr. E. H. Vits, general director of Vereinigte Glanzstoff Fabriken, also said that Germany's 1960 manmade fiber output would rise over 1959, but not by much because of the healthy uptrend recorded in the last half of '59. This far Germany's manmade fiber output is up 17% over 1959.

EAST AFRICA'S FIRST RAYON fabric mill is being planned for Mombasa. Sir Ernest Goodale, vice chairman of Kenya Rayon Mills, said the plant would be turning out one million pounds sterling worth of cloth yearly, starting in mid-1961. This would be equal to one-sixth of present East African rayon cloth imports. The up-to-date plant will need 600 workers and keep 500 of them three shifts for six days a week.

MANMADE FIBER BOOM is forecast for the 1960s. Giovanni Balella, president of Italy's Man-Made Fibers Producers Association, said "the rising trend is especially strong for rayon filament." He thought Italy may continue in first place among the world's exporters of continuous filament. Shipments to the U. S. have been running well above 50% of the totals.

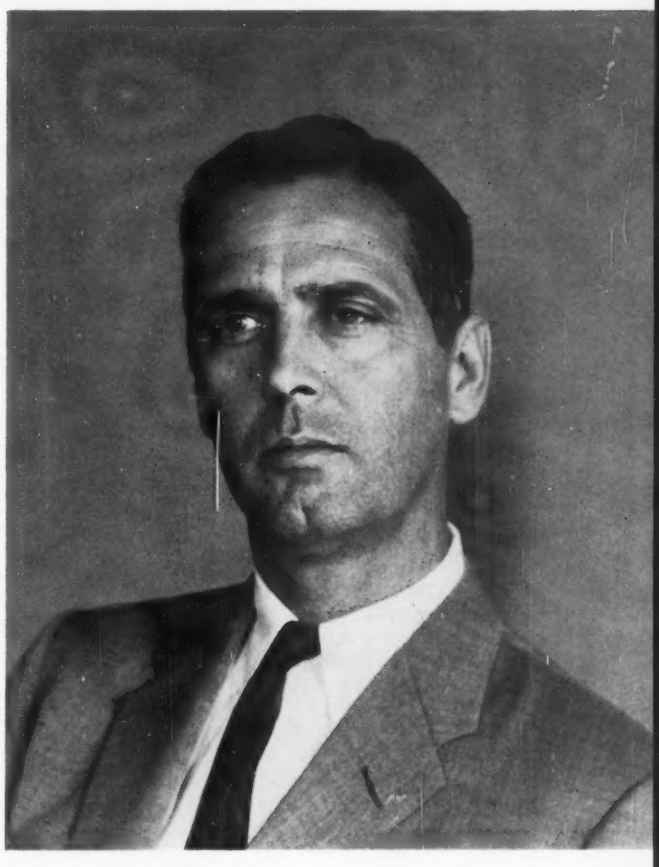
MALAYA BANS RED CHINA cotton textiles. Pressure from local mill men induced the Malayan government to halt "dumping" of the following items until further notice: dyed, bleached or printed drills, poplin, satin drill, tussore and serge. Import curbs on Chinese bleached and dyed jeans and shirtings and sheetings, levied in 1958, succeeded in protecting those mills, it was said.

EAST GERMAN-BUILT RAYON mill in Communist China has begun operations in Paoting, Hopei Province. The plant, which was begun in 1958, is producing viscose fibers.

INDIAN SITE SELECTED for a five million pound per year rayon plant. The builders will be a group of three Japanese firms and one Indian, Baroda Rayon Corp. The equipment is being made by Mitsubishi Heavy Industries Ltd. It will be worth some $6.3 million. Asahi Chemical will help train Indian technicians. Mitsubishi Shoji Kaisha is handling the exports. The plant will be at Surat, near Bombay.

UN GROUP FORESEES RISE in world demand for hard fibers—particularly sisal and hennequin. The Food and Agriculture Organization says 1960 output of all hard fibers will reach 855,000 metric tons, or 10,000 over 1959. Industrial demand for ropes and twines has firmed prices, FAO says. Sisal output makes up 60% of the total.

Unknown a decade ago, tufted constructions now account for 60% of carpet production. The rise of tufting has jolted and revitalized the floor covering industry. Here's the story of one up-and-coming carpet mill and its fast-moving head man



NOLAN HELMS' MAGIC CARPETS

By the Editors

THE TEXTILE INDUSTRY is full of surprises. For some, these surprises mean opportunities for profit, growth and the fuller realization of personal abilities. For others, surprises, coming as surprises are wont to come, suddenly and unexpectedly, mean disagreeable setbacks, fumbled or ignored opportunities and, all too often, painful decline.

This is the story of a big surprise in one important area of the vast textile industry, carpet manufacturing; a surprise that has, happily, meant growth and success and gratifying rewards for a group of unpretentious yet ambitious and courageous business men. These men, in a little more than a decade, have created a whole new industry within the world of textile manufacturing. We are telling the story of these newcomers to carpet manufacturing by telling the story of one company that in many ways is typical of most of them. Our story is the rise of the tufting industry as exemplified by a small, adventurous firm that is steadily growing in stature with every year—Croft Carpet Mills, Inc., of Fort Oglethorpe, Georgia.

Croft, during the past two years, has caused big ripples of excitement among carpet manufacturers, wholesalers and retailers, and more importantly among American homemakers looking for brightly colored longwearing floor coverings. The stir of interest stimulated by Croft has been caused by its plumping heavily for the production of a broad line of tufted carpets made with Allied Chemical's Textured Caprolan nylon continuous filament yarns. Croft today has a line of Caprolan carpets in 29 stock colors along with a variety of additional colors custom-dyed for customers' specifications. The wide range of these colors all found in durable constructions which look like carpets far more expensive than Croft's top quality, which retails at $12.95, is the source of the aforementioned considerable excitement among the floor covering brethren.

Like so many tufting outfits that have literally turned the carpet industry upside down during the past ten years, Croft had its beginnings back in Georgia in 1945 when Eston Croft, then 27 years old and his father A. M. "Pop" Croft, then 53, became interested in the tufted business. Young Eston at that time was in the trucking business and his father in the coal trade. They had heard about the bedspread tufting business that had grown up in and around Dalton, Georgia, and began to feel that it was a coming field in which they might make money. Scraping together a little capital, they set up a small plant with 12 table model tufting machines, made, as most tufters were in those days, by adapting heavy duty

sewing machines to the function of sewing yarn to cotton sheeting to make chenille bedspreads.

They did so well with bedspreads that, in a few years, they outgrew their little shop in Chattanooga and built themselves a new building, adding equipment to move into the manufacture of small rugs as so many bedspread tufters were doing. Their line of small cotton tufted rugs and bath mats sold briskly. By 1950, the Crofts were ready for another expansion. This time, they set up their new and bigger plant in Fort Oglethorpe, Georgia, not far from Chattanooga, converting to their needs an old Army barracks bought as war surplus.

In their new plant, they installed new tufting machines, developed to meet the demands of the flourishing tufting industry by such forward-looking machinery makers as Cobble Brothers, and Super Tufter. With these new faster machines, they shifted the bulk of their production from small rugs to 12 foot wide carpet produced as roll goods.

Manmade Fibers Tried

From cotton, they turned largely to the use of spun rayon yarns, and were thus one of the first tufters to introduce a strong rayon program to their dealers. The advantage of rayon was brighter, yarn-dyed colors with better color matching, as well as the additional advantage, inherent in the special rayon carpet fibers developed by the research of the rayon producers, in offering tougher, longer wearing carpets.

By 1954, Croft Carpet Mills was doing so well that its management thought the time was ripe for another important move. Croft boldly pushed forward to take its place among recognized carpet manufacturers by opening a sales office at 295 Fifth Avenue, the stronghold and showplace of the old-line established carpet mills in the important New York market.

The New York sales office was rounded out with a staff of salesmen working from key cities throughout the country, who were having little trouble selling the Croft output of cotton and rayon tufted floor coverings in the low to medium price range. Eston Croft, by this time thoroughly informed on the best methods of making tufted carpets, felt the need for a good man to head up his firm's expanded sales effort. He found the man he wanted in Nolan Helms, a young salesman of carpet yarns for Callaway Mills whom he had come to know and value in years of business contacts. Helms, quick to realize that he was presented with a golden opportunity to advance his own career, promptly accepted Eston's offer.

An Alabama Boy

Nolan Helms, born in Alabama in 1917, graduated in 1939 from Auburn University with a degree in textile engineering and specialized training in dyeing and finishing. Within two weeks of his graduation, he joined Callaway Mills at LaGrange, Georgia, and in time was assigned to a variety of sales tasks in that big outfit. When he took leave of absence from Callaway in 1942 to join the Army, he had advanced to the position of sales supervisor.

Returning to civilian life and Callaway in 1946, he was assigned to selling in the field. He traveled throughout north Georgia, Tennessee, and Kentucky, but the bulk of his selling was done in the Dalton area and many of his customers for Callaway yarns were bedspread and bath mat tufters. Among them was Croft Mills, and Helms' friendly, intelligent, and always customer-oriented selling efforts, as well as his broadening knowledge of the tufting industry, persuaded Eston Croft to enlist him as sales manager.

Selling for Croft, Helms tirelessly and cheerfully traveled the length and breadth of 48 states, calling on carpet wholesalers and retailers. By 1956, he had done so well in broadening Croft's list of customers and in building volume for the firm that he was made vice president. Last May, he reached an understanding with Eston Croft which led to the acquisition of 83% of Croft's stock. This, added to the 17% he had been permitted to buy during his years with the firm, gave him 100% ownership.

His acquisition of Croft has been made possible, Helms is quick to point out, by the support of Walter E. Heller & Co., the Chicago factoring firm that has factored Croft's accounts for some years. When Eston Croft told Helms that he was of a mind to sell the company, Helms flew up to Chicago and talked the matter over with Heller's management. So great was the confidence that Heller has in Helms' managerial and selling abilities, that a decision to lend him the money he needed to buy Croft was reached after an hour's discussion. Thus it can be said that for the right man who has the courage to grasp favorable opportunity boldly when it presents itself, the textile industry is still a field of glittering promise.

Upgraded Merchandise

And there can be no question that Nolan Helms, soft-spoken, warmly friendly and tirelessly energetic in his devotion to his chosen work, is the right man. Under his leadership as a carpet marketing man, Croft is day by day pushing forward from its earlier position as a supplier of run-of-the-mill promotional tufted carpets to a producer of highly styled, quality goods marked by a bold awareness of the importance of color and fresh textures in a field where these qualities are becoming increasingly salable.

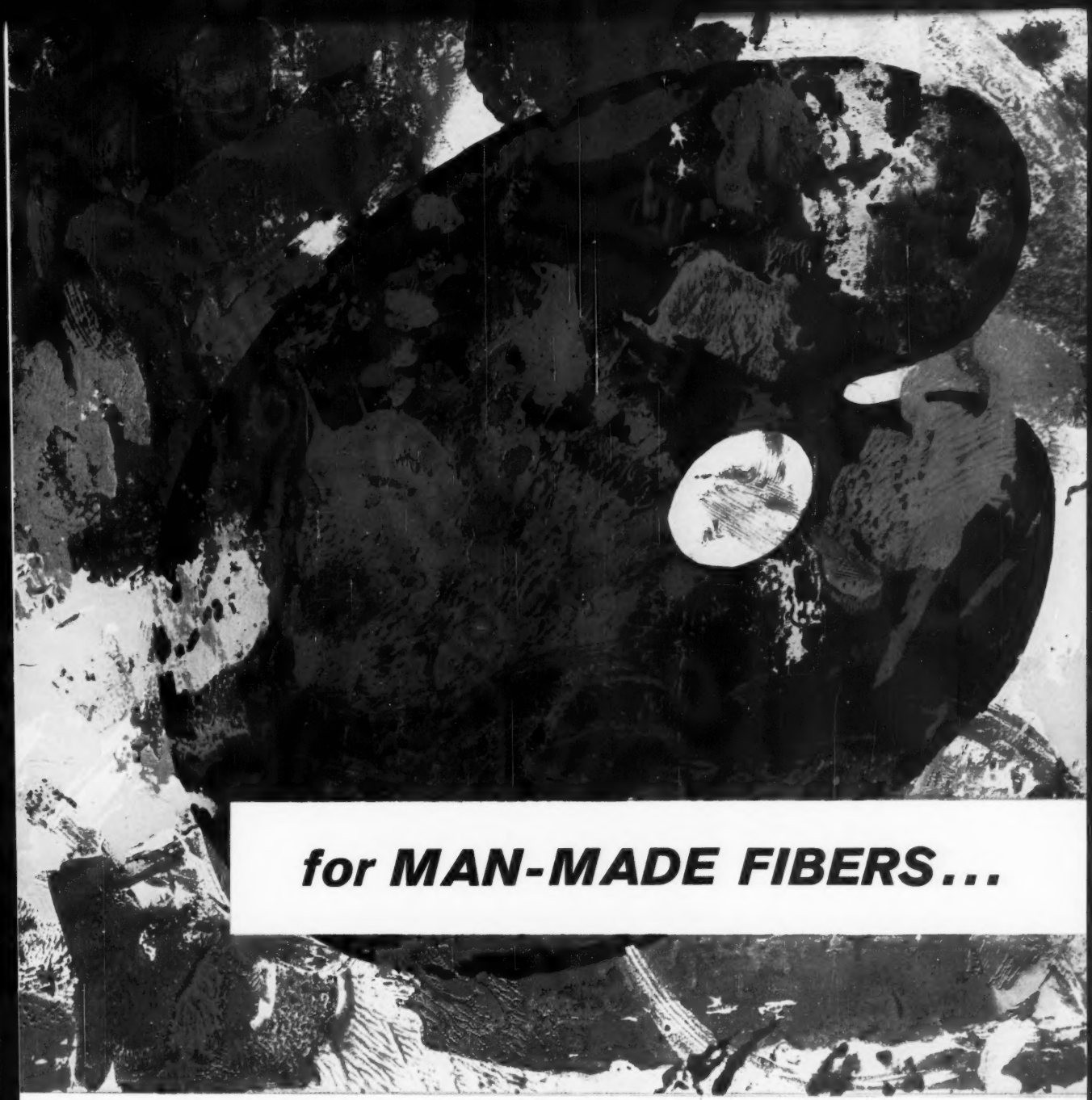
Croft's operations today are firmly based on a modern plant with 125,000 square feet of floor space housing nine big Cobble Brothers 15 foot tufting machines. The plant has a new 70 foot finishing oven to give Croft fabrics latex backings. Recently the firm has gone in heavily for "double jute" backings for its fabrics—a jute fabric to which the surface backing yarns are sewn supported by a second sheet of jute cemented by latex to the back of the carpet. Among the advantages of the double jute treatment are greater dimensional stability, a heavier fabric to stand up longer under wear and one that stays better in place when laid on a floor. Croft's carpet production in terms of fibers runs these days as follows: 5% cotton; 15% rayon; 30% wool; 15% nylon staple fiber, and 35% textured Caprolan nylon.

Rising Sales

Sales this year will be up to $8 million, in Nolan Helms' estimate. Along with its sales office in New York, Croft has major sales offices in Chicago, Dallas and Los Angeles serving as bases for the efforts of a force of 20 salesmen.

Croft's heavy preponderance of Caprolan textured filament nylon carpets is a measure of the confidence that Nolan Helms has in this new trend in carpet manufacture. He believes—and the Caprolan carpets turned out by Croft bear him out—that textured ny-

(Continued on Page 131)



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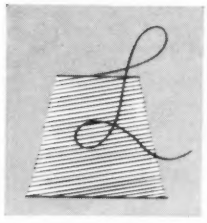

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Max Paabo

On his weaving machine, compressed air replaces the shuttle

He invented a shuttleless loom

By the Editors

ONE DAY in 1945, a thoughtful man strolled the harborside in the Swedish seaport of Norrkoping. He was deep in introspection, pondering a problem that had puzzled his mind for years. He was a textile engineer and it was his dream to invent a speedier machine to replace the traditional shuttle loom for weaving fabrics. It had long been his belief that a better machine could be devised that would weave fabrics much faster than the conventional power loom in which a shuttle is literally batted back and forth between the warp, or lengthwise, yarns to interlace the filling yarns and thus form a cloth.

As this man, Max Paabo, an Esthonian who had come to Sweden at the end of World War II, saw it, the core of the problem was to invent some other, more efficient way of doing the shuttle's work. As he turned over the problem in his mind for the thousandth time, he looked out over the water and watched a sturdy Diesel fishing boat putting out to sea. In the still moist air, the exhaust from its throbbing engine emerged from its stack in short, regular puffs, each one forming a perfect ring. Why not, it occurred to Paabo at that moment, employ a jet of compressed air in controlled puffs, somewhat like the exhaust from the fishing boats, to propel the filling yarn across the loom between the warp yarns? In this way, he reasoned, it might be possible to do away completely with the cumbersome shuttle.

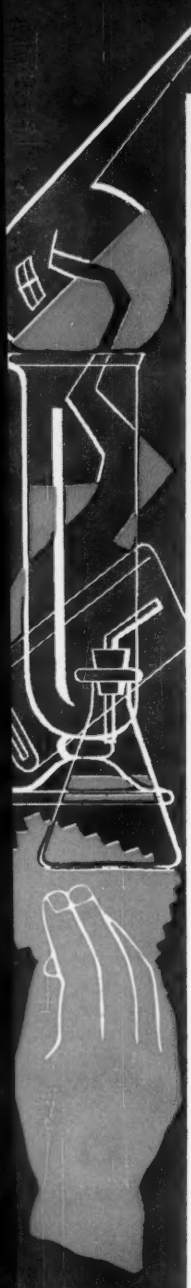
To substitute something so impalpable and hard to control as a jet of air for the hardwood shuttles used on even the most modern conventional looms seemed at first impression a fantastic idea. But Paabo, with the wild imagination and daring inventiveness that is often the mark of truly original innovators, decided to try it. He was working in a cotton mill in Norkopping where the long years of training he had brought with him from Esthonia were valued by his employers. But during his evenings and weekend spare time he toiled feverishly to create a simple machine that would demonstrate his principle of using compressed air to serve as the power to carry the weft yarn through the "shed" of warp yarns to weave fabric.

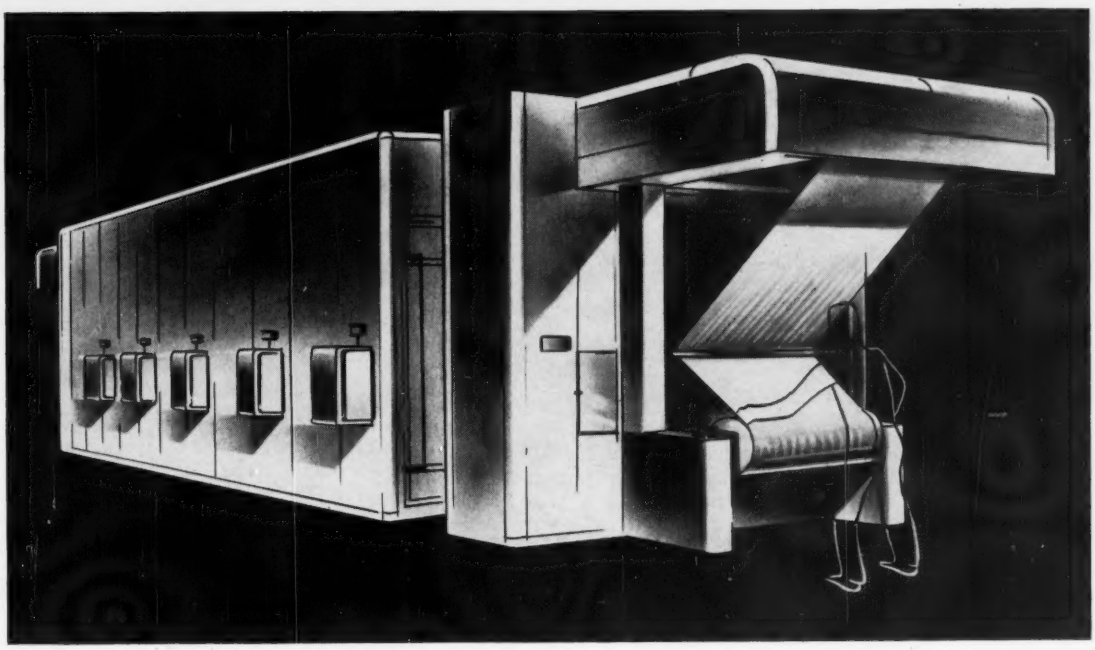
Using odd machine parts, including a bicycle pump to compress the air, in two months he had a machine that demonstrated his idea although it was far from being a commercially usable loom. But in spite of its crudity, the model worked well enough to weave a plain 12-inch-wide cloth, inserting the filling yarns by means of a controlled, intermittent jet of compressed air. Paabo had invented what many men had long dreamed of creating—a loom without a shuttle.

Once he had a working model, Paabo fortunately had little difficulty in finding a backer to finance the tremendous amount of work that lay ahead of him before he could develop his model into something resembling a shuttleless loom that could take its place in mills to weave salable cloth. He made an arrangement with Kooprativa Forbundet, an association of Swedish cooperative societies, who saw great ultimate profit possibilities in his air jet loom.

(Continued on Page 44)

DYEING and FINISHING SECTION





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Don't always blame the dye!

Defective yarns and fabrics, poor methods also can contribute to poor dyeing results

By Holger Thuemmel

THIS ARTICLE refers specifically to the making of worsted or woolen goods and their blends. However, many of the features mentioned could be applied to the textile industry in general, including all types of fibers.

At times it is required to change the source of raw material suppliers. Under these circumstances it is good practise to investigate fully the material in regard to shrinkage, whiteness, dye affinity, ability to spin, tensile strength, and other criteria for specific purposes.

Sound manufacturing should not permit the stock in the warehouse to run so low that one would have to resort to completely new stock in order to continue the manufacturing process. Generally, the new supply is fed into the old standard material at a predetermined percentage, and only a few pieces are made while this procedure is closely watched all along the various processes. When this proves successful, the predetermined percentage is increased, gradually. In this way, abrupt changes are avoided and possible inferior behavior of the new stock detected in good time. Laboratory testing of the newly bought material is of some help. However, a cross sample from the seller and the delivered carload of wool, or any other raw material, are not necessarily the same thing.

In the process of buying, one always finds the bargain hunters. There may be such a thing as a bargain, but it surely is a great rarity. The writer has come across purchases of water-damaged wool, which could be had a few cents per pound cheaper. Unfortunately, the water damage was done by the Fire Department! Similarly, salt-water-damaged wool was treated with salt water while the hold of the ship, transporting the material, was gently smoldering!

It is obvious such material has been scorched and is tender, will not spin well, is yellowish in tint, and possesses different dyeing properties. Even at ten cents per pound less it is a questionable bargain, as no more than ten percent of this material could be added to a standard lot, and the use for pastel shades would be entirely out of the question.

Similar things could occur with hides and rabbit skins, and probably a variety of materials.

Waste

All manufacturers use waste. The fully integrated mill will use most of its own waste and therefore knows what it is working with. However, many mills buy waste. This item has become a sore subject since the arrival of the various synthetic fibers. These have found their way to the garnetter as well as the natural fibers, and obtaining any waste of just one fiber is very unlikely.

The garnetter works at a rapid rate, and the exact cleaning of the machines, after the various runs, is time-consuming for an operation that yields only a small margin of profit. It is, therefore, necessary to investigate the bought waste. National Aniline has several identification stains that will show the various fibers in the waste and the buyer may be able to judge the suitability of the waste for his purposes. Omission of this check can lead to sad experiences in the final product.

Colored Waste

Colored waste is sometimes used by the integrated mill as is, at the picker or card. Provided everything is known about the color, and the waste is from a previous similar lot that has performed well, this method is suitable.

However, using colored waste from previous lots that were lacking in crockfastness, and then adding this to a new lot that has been greatly improved in regard to crocking, just does not make any sense, and yet is done every day. Such waste should be well scoured before adding it to the new lot.

Colored waste is often stripped. For greatest improvement in the lightest possible shade, it is best to strip in the raw stock (rather than to spin the waste into yarn) plus new raw material and weave these into pieces and then strip the pieces.

This procedure is frequently used on cheaper goods, but the question of the end-use enters in regard to spinning. Colored waste, not stripped, will spin better than stripped. If the highest possible count of yarn is needed, no stripping in the raw stock should be the answer. Yet, if the hand of the material is a criterion, the piece should not be stripped, because the stripping and subsequent dyeing do not promise a soft hand. In this case it would be better to strip the waste in the raw form.

At times the colored waste is so poor that a decision to dye it to a darker shade is the wisest course, particularly when the material would not be able to stand two operations, stripping and dyeing, and still be useful for spinning.

At the same time, some information about the type of dye present on the colored waste is of importance, as this must be reasonably compatible with the intended dyeing operation in order to avoid unsatisfactory end results.

Finally, there remains the risk of buying cheap mixed waste when some continuous filaments have escaped the action of the garnet. This will cause no end of trouble in the carding operation, even for such low grade materials as bonded or punched fabrics.

Carbonizing

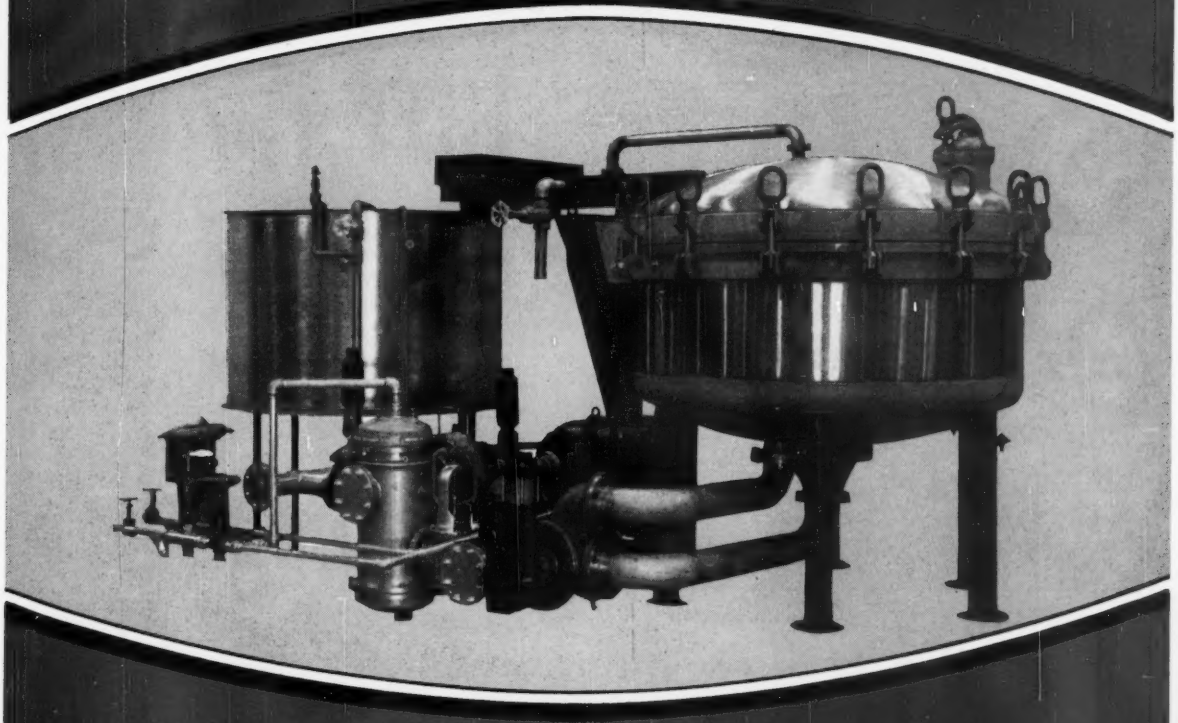
This operation removes the burrs, shives and other vegetable matter from the wool. It is done on the raw

(Continued on Page 34)

Holger Thuemmel is employed in the Tests and Inspection Dept., National Aniline Division, Allied Chemical Corp., Buffalo, N. Y. This article is reprinted, with permission, from DYESTUFFS, the quarterly publication of the National Aniline Division.

We Could Build Them Cheaper

BUT WE WON'T



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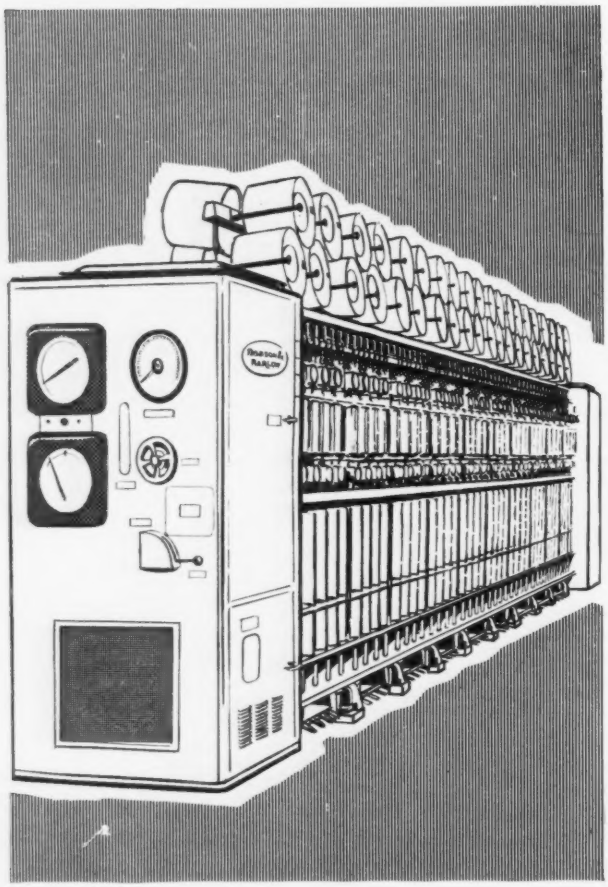

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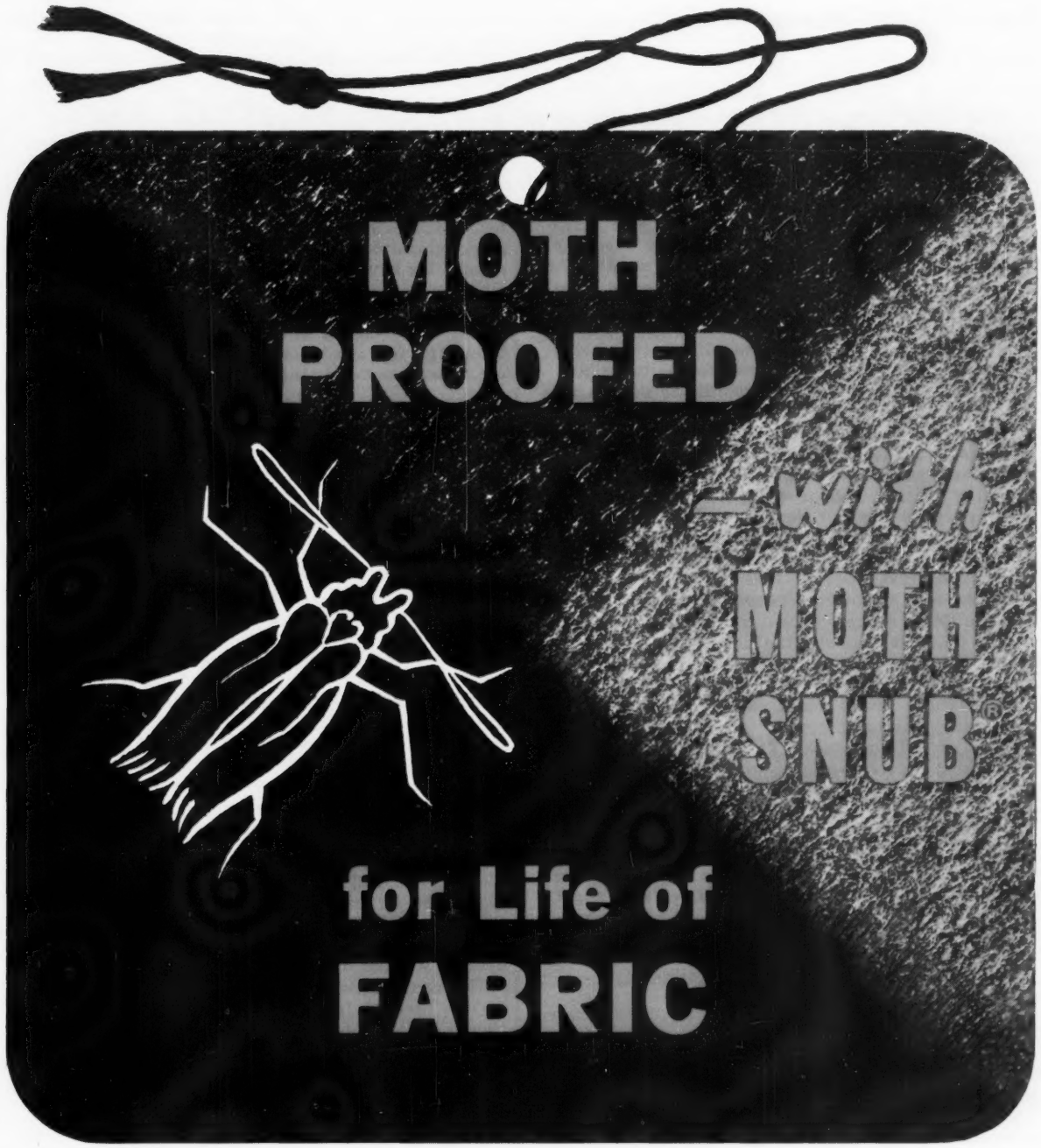

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Don't always blame the dye!

(Continued from Page 30)

stock as well as on piece goods. The question of when to do this on the raw stock depends on the amount of burrs and other foreign matter present in the wool. It must be kept in mind that carbonized stock does not spin as well as uncarbonized material.

Sometimes it is better to picker such lots again in order to remove most of the burrs, etc. This may cost a bit more, but has distinct advantages as to hand, spin, and possible elimination of dye trouble from carbonized stock. Of course the writer has seen wools with such excess of foreign matter that there is no choice but to carbonize, but generally there is some question in the matter of the best course to be pursued. A small trial run is well worth the trouble for the correct final decision.

Carbonizing in the piece is widely done on modern carbonizing ranges. The big question is whether to carbonize before or after dyeing. For economical and flexibility reasons, it is generally felt that to do this before dyeing is the best, yet there is no question that it is safer to carbonize after dyeing, particularly as National Aniline has a wide range of dyes suitable for this operation.

Experienced manufacturers are aware of the minor range of shade changes caused by this operation, and provide for these by dyeing the material either slightly darker or a slightly different tone to compensate for the carbonizing action, as well as the subsequent neutralization. From actual experience, the writer knows that carbonizing after dyeing yields results relatively free from seconds. This cannot be said about carbonizing before dyeing.

The economic pressure, as in all operation procedures, may have led to the choice of carbonizing before dyeing. Yet, on interviewing various manufacturers they are willing to admit to a larger percentage of seconds. However, there is no clear picture on this subject. A rate of 2% seconds per year might more than equalize the economy aspect of carbonizing before dyeing versus the safer operation, not to mention the delays in attempts to re-dye blotchy pieces (mostly unsuccessful) and the general headaches connected with seconds.

Cross Dyes

Cross Dyeing should be accomplished in the shortest possible time, at the lowest possible temperature, with the least amount of acid, where such is needed. National Aniline manufactures a wide range of excellent dyes for this operation, for the ground shade as well as for the cross dye effect.

Removal of Unattached Dye

In recent years, competitive pressure, labor costs, prices, etc., have led to the practise of trying to cut all possible corners. On dyeing heavy shades, it should be kept in mind that these need a better rinse than lighter shades. Any attempt to rush this work usually results in no time-saving at all, as it has to be corrected later by extra work.

In the case of raw stock, heavy mechanical action plus the correct scouring ingredient is the best procedure. Everything removed in this manner will respond better when the woven material is scoured. Yet, on many occasions, the writer has seen heavily dyed raw stock, insufficiently rinsed, dumped into the hopper just before the drier. Actual observation of the heavily-colored squeezed-out liquor at the first mangle gives a clear indication that such carelessness will lead to trouble. Despite this, many attempts are made to blame the dye, which is practically never at fault when properly selected and applied.

In the case of piece goods, these require a longer scouring and rinsing period, and the pressure on the wash box rollers may have to be increased.

Where it is very difficult to clean material, such as heavy indigo navy and similar types of goods, the gentle abrasive action of fuller's earth has given good results. We have often had complaints about crocking, where the only reason was a very poor scouring job.

At times, the dye is blamed for the poor performance of the raw material in the mill, especially for dark brown, navies, and black shades. The real reason for occasional poor spinning and poor hand is that all re-dyes, be they raw stock or pieces, find their way into the dark shades of brown, navy, and black. It is then obvious that any material that must stand the boiling operation of dyeing twice will not handle as well as when subjected to this treatment only once. The same is true about the hand of pieces being re-dyed. They are generally harsher.

Fastness to Wet Finishing

The National Aniline Division manufactures many dyes that will stand up well to heavy fulling, potting, crabbing, steaming at high pressure, full decating and other severe treatments. At times, the dye must stand three or four of the above treatments in successive operations. This is often the case in the making of uniform fabrics, or other heavy cloths. It is general practice to pass all shades from the dyeing operation somewhat on the darker side, when these have to withstand a succession of severe operations. This is a safety factor for the protection of the final shade.

Decating

This process is used to improve the lustre, condition and hand of the fabric. At times, this may be done in the greige, but by far the greatest volume of material is decated after dyeing. Briefly, steam is forced through the cloth rolled onto a perforated roll while in an autoclave. It is very important that the proper dyes be selected to withstand this treatment.

The greatest difficulties arise when the converter decides that the fabric which he has so far accepted should be a little firmer or have more lustre or a better hand, and then sends it out to a shrinking and finishing establishment to have the goods decated, without the knowledge of the type of dye employed on the material. Converting is done to a great extent in the Metropolitan area, and the writer has witnessed the effect of decating on bright shades for ladies' wear, which lost so much of their shade and strength that they were not acceptable after this treatment.

It is more easily understood that such errors in manufacturing occur more frequently where the work is performed by different parties rather than by an integrated mill. Other reasons for decating are: that the construction of the cloth is somewhat low, the hand is flimsy and the anticipated shrinkage is intended to overcome the original skimping on the construction. This can never be done successfully, unless the correct dye has been used on the goods.

Finally, there is little doubt that the decating process enhances the beauty of the cloth, improves the firmness of the hand and aligns some small distortions of the weave while also imparting luster. ■

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From Australia

DRIP-DRY WOOL FABRICS

By Robert M. Austin

SAN FRANCISCO—With the arrival of an Australian Trade Mission in this city recently, the American textile industry was introduced to some promising developments which forecast a possible future for drip-dry woolen goods. Australia, it was revealed by the textile manufacturers in the 36-man group, has developed a drip-dry woolen fabric now being introduced to the domestic market in the form of men's shirts and women's dresses.

Henry Haskin, managing director of Henry Haskin & Co. of Melbourne a manufacturer of printed wool fabrics, said his drip-dry dresses are available in all shades. They can be washed easily in lukewarm water with a mild soap, and, when hung on a hanger, dry readily without loss of shape. He plans to introduce his dresses in the United States within the next six months in a 3½ ounce weight to sell at wholesale for $12 and higher. The fabrics are also shrink-proof and can be permanently pleated. Drip-dry wool shirts are now retailing in Australia for about $5.25, he added.

The development of the new fabrics was the result of research by the Commonwealth Scientific and Industrial Research Organization, according to Sir Douglas Copland, leader of the Trade Mission.

The new processes, he pointed out, are being made available to textile manufacturers throughout the world for modest fees, in order to stimulate the use of wool cloth. Trade names of the processes are "Sironized" for shrink-proofing, "Siroset" for durable creasing and pleating, and "Siromoth" for moth-proofing said to last the life of the garment. The key to the performance of the new easy-care woolens is the fine grade long staple wool from Australia's Merino sheep, Sir Douglas said. These sheep have increased from 100 million to 153 million since World War II. Japan, which purchases over ten times as much wool as the United States, recently moved into the lead as the largest buyer of Australia's fine wool, with the United Kingdom in second place.

Because Australia is eager to stimulate the sale of its wool, it finds the United States' trade restrictions against the import of raw wool a disturbing problem. "It is unfortunate that the United States places barriers against the importation of Australian wool," Sir Douglas said. "The resulting higher cost makes it difficult for American mills to compete with those of Europe in the production of quality woolen and worsted products."

EASY CARE WOOL APPAREL—Sir Douglas Copland (left) tells Mayor George Christopher of San Francisco about a new Australian drip-dry wool shirt.

Australia recently dropped all quantitative restrictions against imports from the dollar areas, hoping the United States will follow its example so as to increase trade between the two countries. Because wool is the Commonwealth's largest industry, the 25 cents per pound duty levied by the U.S. is hindering Australia's ability to buy more goods here, the Australians claim. They point out that this trade restriction is unjustified because the U.S. does not produce a wool comparable to the quality of the fine and superfine Merino.

Australia's textile industry is not completely devoted to production of woolen goods. Cotton, imported from the U.S. and Egypt, is used in home furnishings, pillow cases, sheeting, denims and twills, as well as apparel fabrics. Surprisingly, there are no mills producing fine poplins but the booming Australian economy has created interest in this market among both domestic and foreign investors. Australia's population today is 10 million.

An acetate mill at Tomago, Newcastle, New South Wales, is producing yarn for domestic use. One of the world's most modern nylon plants was constructed recently near Melbourne by British Nylon Spinners, Ltd. All of its output is presently being absorbed by the domestic knitting and weaving industry. Du Pont Orlon and other synthetics are imported from the U.S., and used primarily in the knitting industry. The Australian textile industry has also achieved a marriage of wool and synthetics, resulting in fabrics which possess the best characteristics of both materials—the warmth of wool and the strength, long wear and shape-retention ability of polyester and acrylic fibers.

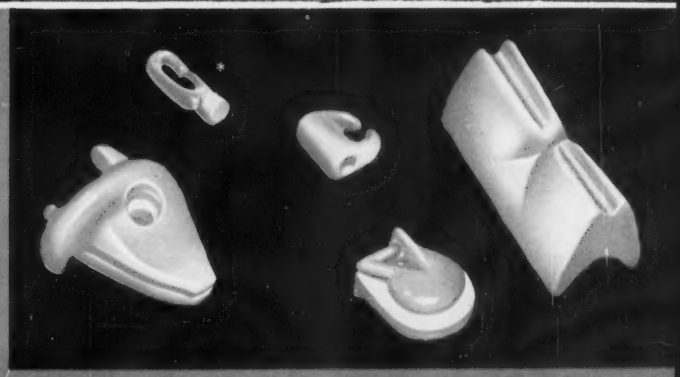
The Commonwealth also has a knitting industry which is marked by good workmanship and modern plants. A marked difference between the Australian and U.S. textile industries is that mills in the Commonwealth must be geared to much shorter runs than their American counterparts.

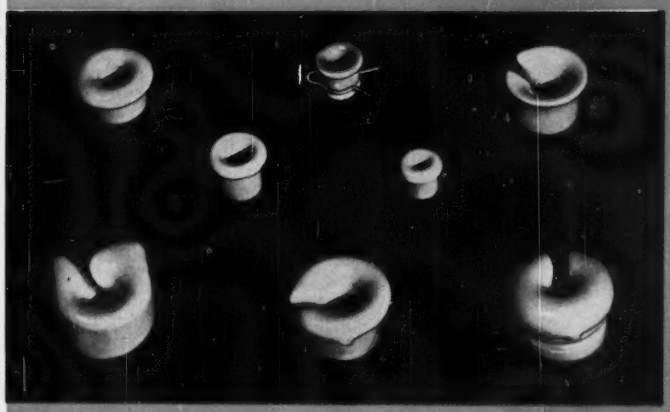
"Where an American mill can run one type of fabric for a great length of time, we must acknowledge the demands of the domestic market for many different types," explained Geoffrey Junek, managing director of Rotarit Textiles, Auburn, New South Wales, a member of the Trade Mission. ■

MACHINERY and EQUIPMENT SECTION

MITCHELL-BISSELL THREAD GUIDES

For Every Textile Service . . . For More Than 70 Years





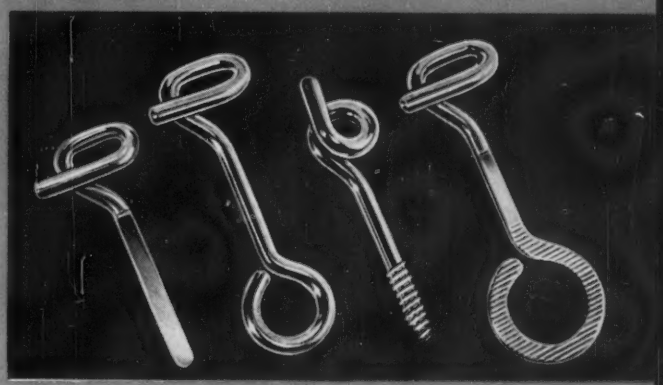
Above—"BLUE SATIN FINISH" PORCELAIN GUIDES.
An exclusive development of Mitchell-Bissell—guides with this finish are more resistant to thread wear than any glazed porcelain guides ever offered the industry. "Blue Satin Finish" Guides, instead of being shiny and glass-like, have a surface of thousands of small rounded grains closely packed together. Reduced wear and longer guide life result because, by breaking the continuity of contact between yarn and guide, friction is reduced. * U. S. Pat. No. 2,152,136.

Left—WHITE GLAZED PORCELAIN GUIDES.
The Mitchell-Bissell Company originated the use of porcelain as a thread guide for the textile industry. The white Glazed Porcelain Guides shown here are representative of thousands of patterns that have been sold to all branches of the textile industry since this company was founded over seventy years ago. Improved in quality from time to time they are still "standard."

Right—CHROMIUM PLATED STEEL GUIDES.

Special care is employed in the plating of Mitchell-Bissell Chromium Plated Steel Wire Guides to assure maximum density, hardness and uniformity. Our methods of fabricating and polishing develop a surface smoothness far beyond usual commercial standards. Because of their superior resistance to thread wear, these guides have proven ideal for processing all modern synthetic fibre yarns and blends. More than 3,000 patterns. Special patterns to your specifications. Can be supplied in mirror, satin or matte finish. Samples and Catalogs on request.

"PERFECTION" GRADE. Guides are available to meet conditions demanding finish and plating well beyond the usual standards. These are truly *premium* guides, representing the ultimate in wire thread guide plating.



You can purchase Mitchell-Bissell Thread Guides with complete confidence in their quality and long-lasting efficiency. They can be furnished in standard patterns or to your specifications; or we will gladly assist you in developing thread guides for any out-of-the-ordinary requirements.

EST. 1882

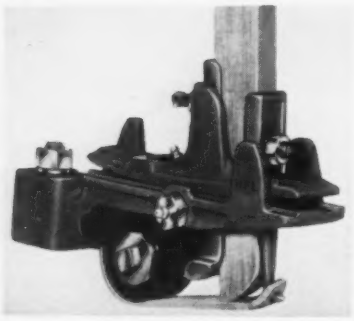
MITCHELL-BISSELL CO.

TRENTON, NEW JERSEY

Southern Representative: HOLT ASSOCIATES, INC., *Greensboro, N. C.*

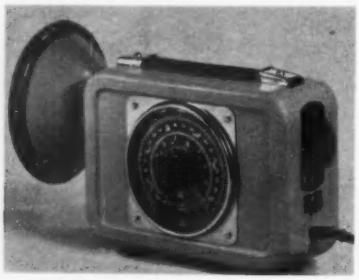
See us at Booth No. 430, Southern Textile Exposition, Greenville, S. C., Oct. 3-7

NEW MACHINERY EQUIPMENT



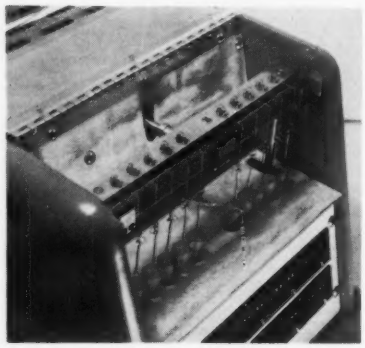
Improved Picking Motion

H. F. Livermore Corp. is marketing a new precision-machined parallel and picking motion, especially designed for Draper looms. Machining of the pearlitic malleable alloy of which the parallel and parallel shoe combination is made is said to produce a perfectly aligned motion of the picker along a smooth parallel path. It thus eliminates erratic boxing conditions, caused by rough castings and unfinished paralleling parts, and at the same time increases shuttle life. *For further information write the editors.*



Revolution Counter

A newly-developed stroboscopic revolution counter, speed measuring instrument and electrical tachometer produced by Mayer & Co., West Germany, is now available in this country from Lenkotex Co. The Mayer "Touro-Strob" is used for accurate measurement of speed and for study of operation of spindles, looms, pickers, shuttles, ring travelers and other moving parts. The Touro-Strob has a total weight of four pounds. *For further information write the editors.*



New Fiber Tester

Fiber Flex Tester, a new testing device for measuring the wear-resistance of fiber, has been developed by Dow Chemical Co. and manufactured by Fibertest, Inc. No larger than a typewriter, the new machine can measure up to 10 fibers as they are flexed back and forth over the corner of a pencil-thin carbon bar. When a fiber breaks, a mechanical counter stops, giving a report on the fiber's endurance. Results can be correlated with actual wear tests on fabric of similar fiber. If the fiber under test is new, its wear-resistance can be determined immediately without going to the expense of an actual wear test. *For further information write the editors.*

Condensate Control

A 3-element condensate control, designed for increasing the productive capacity of steam-heated exchangers, has been developed by Southern Machinery Co. A basically different method of condensate control, the new system discharges condensate in a vapor state and eliminates steam traps. The 3-E system is said to reduce the amount of steam required per pound of finished cloth. The system cost ranges from $875 to $1,700, depending on the number of pieces of equipment to be controlled and the steam load. *For further information write the editors.*

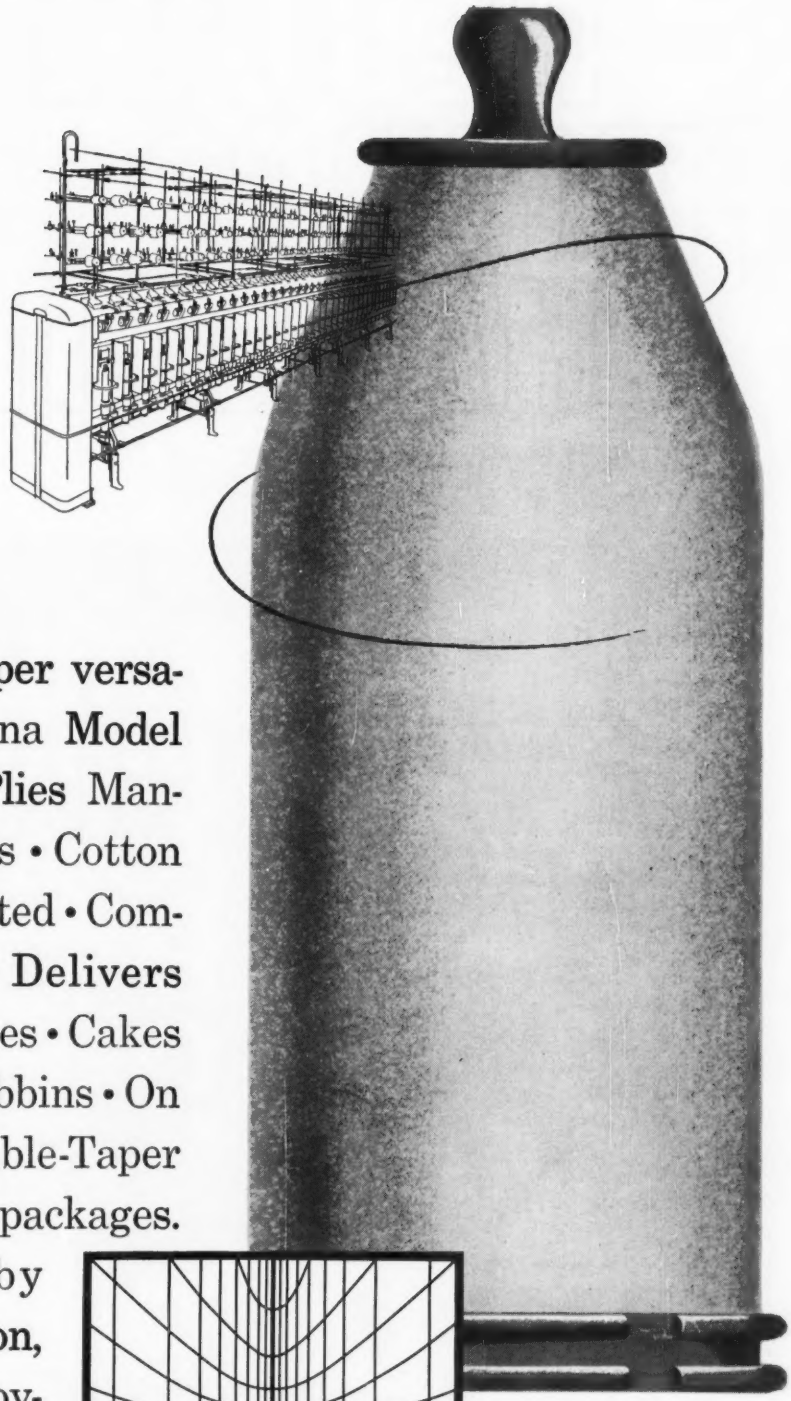
Clutch-Spindle Brake

Kenbrake Corp. is now offering the new Kenbrake, a combined clutch and spindle brake. The company reports it is an entirely new method of stopping one or more spindle tape drives in a manner that allows the tape speed to be maintained and the remaining spindles to work without undesirable speed losses. The Kenbrake consists of a revolving disc on which a free running whorl and an automatic brake are mounted. *For further information write the editors.*

Improved Swing Arm

Edward J. McBride Co. has redesigned the swing arm assembly that accompanies McBride creels so as to provide greater strength. This improvement prevents sagging caused by heavy as well as long packages, the manufacturer states. The swing arm assembly will acept a wide variety of package sizes with minimum need for special adapters, McBride points out. The bowed spring spindle is suitable for parallel tubes, and bobbins. For medium size packages and cones, a holder snaps into position over the bowed spring spindle. A holder is also available for those packages with large inside diameter. Adapters feature the quick change design for instant placement or removal to cut down changeover time loss. *For further information about this product write the editors.*

Demonstration showing how McBrides' new Swing Arm can be used with a great variety of packages.



Investigate the **super versatility** of the Leesona **Model** 10 Ring Twister. **Plies** Man-Made Fibres • Glass • Cotton • Silk • Wool • Worsted • Combination Yarns • **Delivers** from Cones • Cheeses • Cakes • Pirns • Spools • Bobbins • On to Taper-Top • Double-Taper and Straight-Wind packages.

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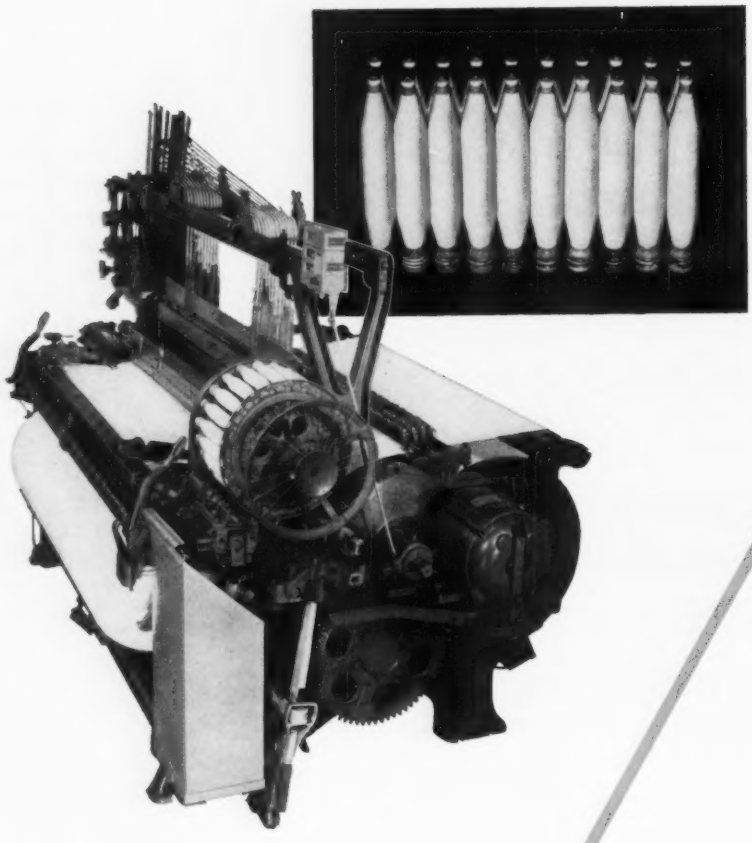
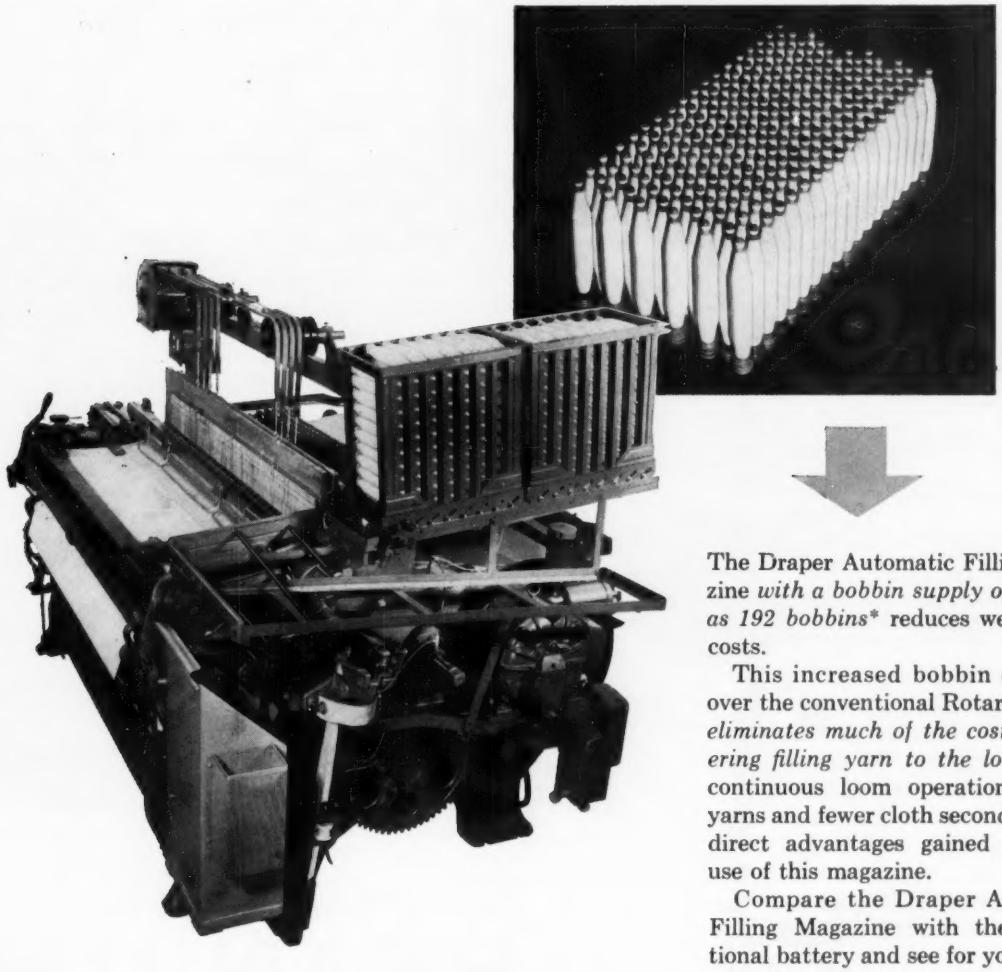
REDUCE FILLING HANDLING...



TO A MINIMUM



The Draper Automatic Filling Magazine *with a bobbin supply of as many as 192 bobbins** reduces weave room costs.

This increased bobbin capacity, over the conventional Rotary Battery *eliminates much of the cost of delivering filling yarn to the loom.* More continuous loom operation, cleaner yarns and fewer cloth seconds are also direct advantages gained from the use of this magazine.

Compare the Draper Automatic Filling Magazine with the conventional battery and see for yourself the many benefits that can be obtained.

For additional information consult your Draper representative.

**1¼" diameter bobbins*

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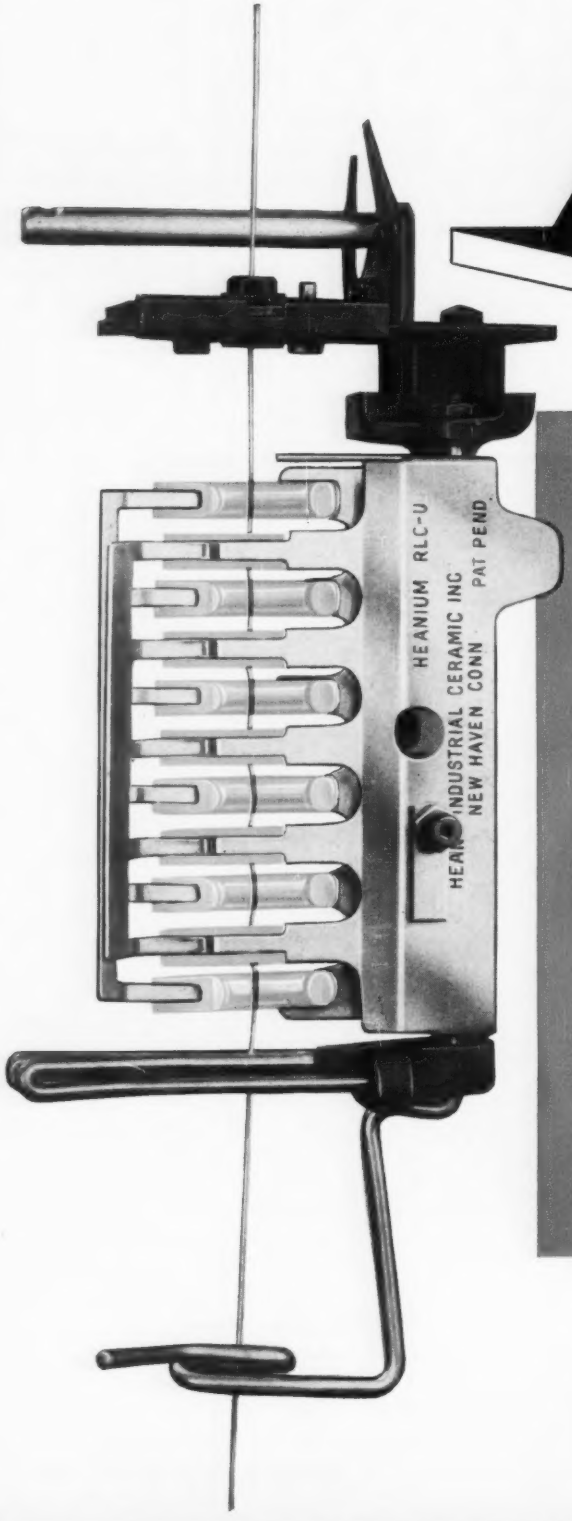
HEANIUM®

RLC-U TENSION ASSEMBLY *



* PATENT PENDING

No. RLC-U Heanium Gate Tension

Heany Industrial Ceramic Corporation is now offering a grid type gate tension equipped with Heanium contact fingers for use on the Universal cone winders.

The new gate tension has a total of only eleven contact fingers, whereas the conventional metal-fingered gate has nineteen fingers. The fewer number of fingers allows the yarn to generate angles from one contact finger to the next, which gives the gate a compensating ability, as well as a snubbing action to compensate for uneven conditions from the supply package.

A unique concave design on the contact fingers gives a much better lateral control of the yarn than the conventional flat face, especially toward the tip end of cone or tube.

The advantages of the RLC-U Heanium tension are:

- **Better quality yarn**
- **Better package formation**
- **Better overall controlled tension let-off**
- **Constant multiplication factor**

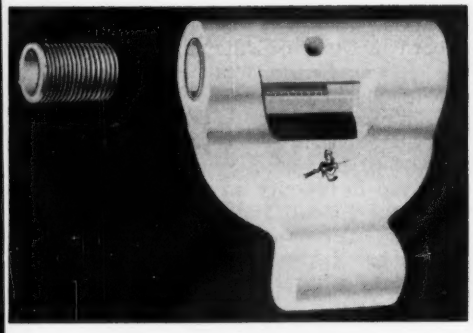
To avoid damage to yarn use

HEANIUM

HEANY INDUSTRIAL CERAMIC CORP.

NEW HAVEN 3, CONNECTICUT

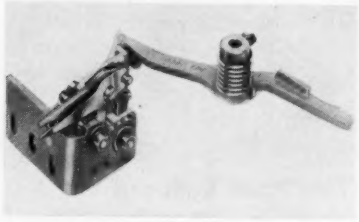
Southern Representatives: R. L. Carroll, P. O. Box 1676, Greenville, S. C.



Easily Lubricated Picker

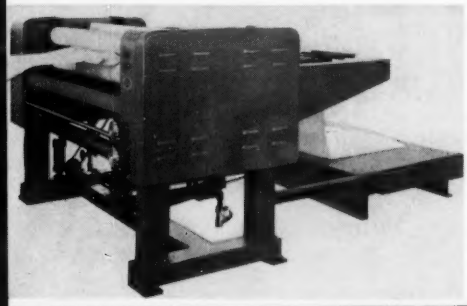
The Denman Textile Rubber Division of the McCandless Corp., has introduced a new "built-in" oil wick for its plastic drop box picker. The wick is cured into the plastic body of the picker and a hole for oiling has been molded into the side. According to the manufacturer, the oil hole accomplishes two major innovations, first to supply oil to the wick, and second, to allow generated heat out of the picker body.

A few drops of oil put into the picker each shift will add increased life to the picker bushing, the manufacturer states, and will also keep the slide rod from scoring. *For further information write the editors.*



Lay Mounted Thread Cutter

A new economically-priced lay mounted thread cutter, designed especially for use with the Crompton & Knowles S-5 and S-6 (Regular) and S-6 (Big Six) looms, is being marketed by H. F. Livermore Corp. The cutter, Model 4962, handles all types and sizes of filling without any necessity for special adjustments. As a scissor-type model, problems said to be inherent in chisel-type cutters are eliminated because the cutting blades are self-sharpening and made of high carbon steel for greater durability and longer work life. *For further information write the editors.*



New Turbo-Beard Spreader Steamer

Cotton Doffer

U.S. Agriculture Department utilization engineers have developed a new type of doffer for use in cotton textile mills, designed to perform two jobs instead of one. The device not only does the work of a conventional doffer—removing lint from toothed cylinders used in preparation of cotton for spinning but also provides air that conveys the cotton to the next stage of preparation. License to use the new doffer in the U.S.A. may be acquired without cost from the Secretary of Agriculture. *For further information write the editors.*

Seamless Knit Machines

Increased production facilities have been assigned to the Reading-Booton seamless knitting machine at Textile Machine Works, Reading, Pa., to meet the demand for machines producing women's seamless hosiery. The machine features a 2-feed automatic, end trimmer that trims all ends to a length of from ¼ to ⅜-inch. It also has a fully automatic vacuum takedown, and new graduating attachment to control the fabric from beginning to end, assure uniform stitch control and consistent loop lengths throughout the stocking. *For further information write the editors.*

Skein Dyeing Machine

Klauder Weldon Giles Machine Co. has introduced a new skein dyeing machine for zipper tapes and other narrow fabrics. The machine, of all stainless steel construction, has a false back design and indirect heating coil said to eliminate snagging of loose tape ends. Both natural and man-made fibers are readily handled. A range of models from 10 to 50-stick machines, provide capacities from 100 to 500 pounds, with an overload capacity, depending on material and shade, up to 100%. *For further information write the editors.*

Turbo Spreader Steamer

Turbo Machine Co. has made its entry into the tubular knit goods field with the development of the Turbo-Beard spreader steamer. The new machine, shown for the first time at the American Textile Machinery Exhibition in Atlantic City in May, has a patented spreading and feeding mechanism that over-feeds the fabric to the steaming zone for maximum shrinkage. The result, Turbo reports, is full elasticity and accurate dimensional control in shirtings, sweaters and skirt fabrics, and in stretch yarn fabrics for girdles, panties and swim suits. *For further information write the editors.*

HEANIUM®

WITHSTANDS HI-SPEED PRESSURE OF SYNTHETIC YARNS WITHOUT WEAR OR DAMAGE

FRONT TBU-2A

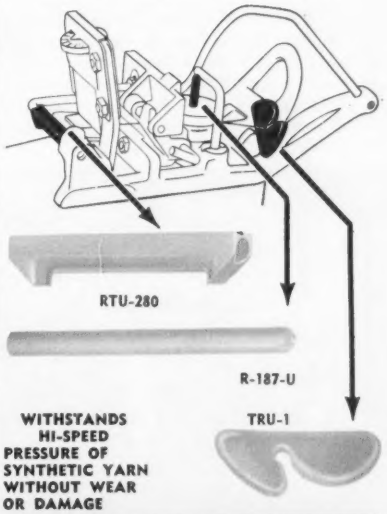
BACK TBU-2A

CUT-A-WAY VIEW SHOWING SMOOTH RADIUS OVER WHICH YARN TRAVELS.

FRONT TBU-2

BACK TBU-2

UNIVERSAL TENSION



RTU-280

R-187-U

TRU-1

WITHSTANDS HI-SPEED PRESSURE OF SYNTHETIC YARN WITHOUT WEAR OR DAMAGE

HEANY INDUSTRIAL CERAMIC CORP.
NEW HAVEN 3, CONNECTICUT

Southern Representatives: R. L. Carroll, P. O. Box 1676, Greenville, S. C.

Max Paabo

(Continued from Page 28)

Backed by this group, Paabo worked for ten years, slowly ironing out the engineering problems that lay between his working prototype and a full size weaving machine, capable of being used day-in-and-day-out in the commercial manufacture of cloth. In 1955, the first Maxbo shuttleless loom, as it was named, was sold to a mill in Valberg, and set to work weaving cotton twill cloth. Today there are 100 Maxbo looms in use in Sweden, England, Israel and Japan. Meanwhile, mounting interest in Paabo's invention throughout the world has resulted in a number of licensing arrangements for the manufacture of the loom by others. In the United States, Edda International Corp., has a license to make it in cooperation with Southeastern Loom Works, a division of Abney Mills, Greenwood, S. C. In Spain, Samarra has been licensed to make the loom for the Latin American market. In Japan, Murata has a license to produce the Maxbo loom for sale in Asia. The right to make them for the European market remains with Kooprativa Forbundet.

Max Paabo visited the United States last May to witness the first public American demonstration of his air jet loom at the big International Textile Machinery Exhibition in Atlantic City. All during the week-long show, mill production and management men stood in deep crowds around the machine, fascinated by its highspeed operation and the absence of the traditional shuttle.

Paabo believes that his loom has a useful future as a machine for weaving plain goods and he expects to make improvements in it that will permit it to produce wider fabrics than the 44 inch cotton print cloth woven at Atlantic City. He also believes that speeds higher than the 330 picks a minute, which was the operating rate at Atlantic City, are feasible, for commercial operation.

Max Paabo was born in Otepaa, Esthonia, in 1905 where his father, Alexander Paabo, was rector of a school. A bright boy who early showed a bent for engineering, he was sent on an Esthonian government scholarship to study at the technical university in Budapest. At the outset the assignment was a difficult one, since he arrived in the city on the Danube not knowing a word of the difficult Magyar language. However, although only 18, he spoke German and English, and in no time at all he understood enough Hungarian to do well in his classes. After taking his degree, he returned to Esthonia to put his engineering training to work in a textile plant. By 1944, when the Red Army annexed his native country to Soviet Russia, he had risen to be technical director of the mill which, over the years, had grown to be a big integrated spinning, weaving and finishing plant with 2,400 workers.

Not wanting to remain under Communist rule, Paabo escaped to Sweden with literally nothing but the shirt on his back. In fact, as he recalls it now, he landed in Sweden actually barefooted, since he had abandoned his shoes to wade out to the boat that carried him across the Baltic Sea to a haven among the Swedes.

Today, comfortably prosperous, he lives in Sweden with his wife and young son when he is not traveling about the world attending to the complex affairs arising from the international licensing arrangements for the manufacture of his invention. A pleasant man with an easy, friendly manner, he takes quiet satisfaction from the growing interest among practical millmen in his Maxbo loom. But, as befits a man who has lived more than half a century and experienced many changes in his life as a result of wars and international upheavals, he is reasonably detached and relaxed about his hard-won success as an inventor of a new kind of weaving machine.

PARTY HONORS DALTON—The annual golf outing and dinner given by American Viscose Corp. to the Dyeing and Finishing Industry this year was staged to honor Harry L. Dalton, vice chairman of the board, who recently retired from active management in the company. Shown below left to right are: A. R. Wachter, technical service representative of the company, Dalton, and M. V. Macfarlan, general sales manager of the company's fibers division.

Rayon, Nylon Tire Yarn Reduced

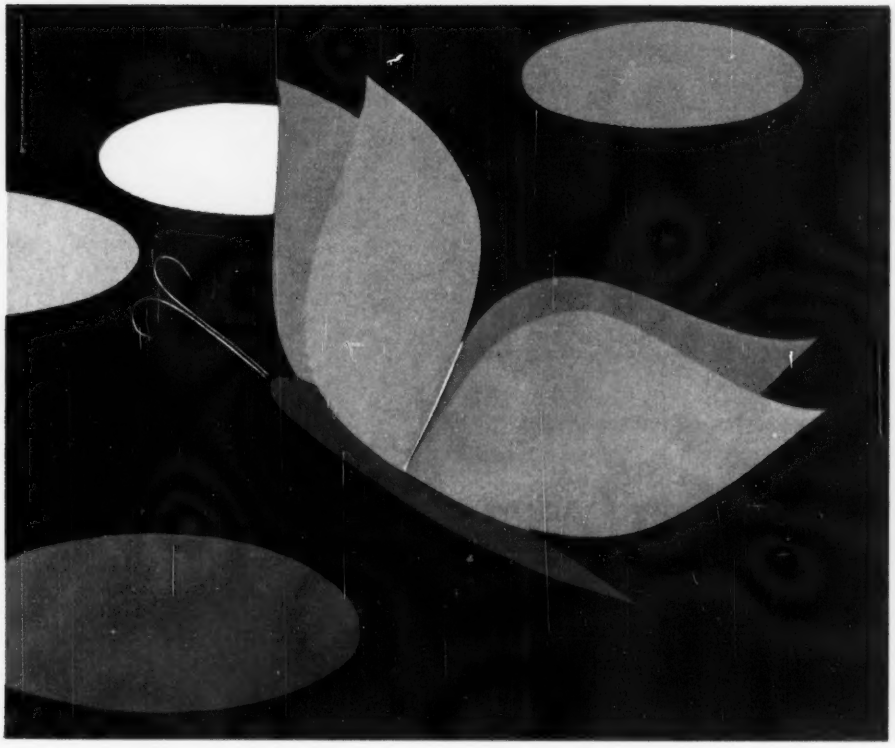
Prices of both rayon and nylon tire yarn were reduced last month by major producers. First announced as applicable for the month of August only, five major producers of rayon tire yarn made known price cuts of 2½ cents a pound. At a later date there were reports that price reduction would remain in force indefinitely. The reduction brought prices of 1100 denier rayon yarn to 54½ cents a pound and 1650 denier to 47½ cents a pound. Companies making the reductions included Industrial Rayon Corp., American Viscose Corp., Beaunit Mills, Inc., and the Du Pont Co.

Following the price cuts for rayon, a number of producers of nylon tire yarn announced reductions ranging from 2 to 5 cents a pound. Companies making such reductions included Du Pont, Chemstrand Corp., and Allied Chemical Corp.

New Acrilan Carpet

Cabin Crafts, Inc., has introduced a new Acrilan carpeting, "Country Spice," in which four separately colored staple fibers are spun together in an imperfect but controlled blending process to achieve a multicolor yarn. The single multicolor yarn is then tufted into a carpet having an iridescent effect. A greater portion of one staple is spun into the yarn to establish the dominant color, though the other three colors appear to an appreciable degree.

PUTNAM PRODUCTS FOR THE TEXTILE INDUSTRY



2042

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